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COEFFICIENTS OF ASSOCIATED LEGENDRE FUNCTIONS

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16. ABSTRACT

The exact coefficients for the explicit forms of the associated Legendre functions $P_n^m(x)$ for integer values of $m, n = 0, 1, 2, \ldots 25$ are presented in tabular form together with two cross-referenced listings of the zeroes for these functions rounded to five decimal places.

The unfactored coefficients and the integer coefficients are presented in adjacent columns for each function. The greatest common factor and divisor have been removed and listed separately for the integer coefficients.

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COEFFICIENTS OF ASSOCIATED LEGENDRE FUNCTIONS

A large class of physical problems involving arbitrary data over spheroidal surfaces requires periodic integrals that satisfy Laplace's differential equation and also have the capacity for giving the solution at every point in space. The associated Legendre functions can often meet this requirement because they are orthogonal spherical surface harmonics and, therefore, appear as angular solutions to many potential and allied problems for spheroidal bodies, including the triaxial ellipsoid. A special feature is their flexibility toward fulfilling such surface boundary conditions as a space between two concentric spheres or two coaxial cones, sections cut out of spherical surfaces by two diametral planes, or free vibrations of a spherical surface layer of air bounded by a circle.

These linearly independent solutions arise from Legendre's associated differential equation which, morphologically, is a specialization of Riemann's general second order equation

$$\frac{d^2u}{dz^2} + \left[\frac{1-\alpha-\alpha'}{z-a} + \frac{1-\beta-\beta'}{z-b} + \frac{1-\gamma-\gamma'}{z-c}\right]\frac{du}{dz}$$

$$+ \left[\frac{\alpha\alpha'(a-b)(a-c)}{z-a} + \frac{\beta\beta'(b-c)(b-a)}{z-b} + \frac{\gamma\gamma'(c-a)(c-b)}{z-c}\right]\frac{u}{(z-a)(z-b)(z-c)} = 0$$

with singular coefficients at $z = a, b, c$ subject to the condition that $\alpha + \alpha' + \beta + \beta' + \gamma + \gamma' = 1$, and denoted by the scheme

$$u = P\left\{\begin{matrix} a & b & c & \\ \alpha & \beta & \gamma & z \\ \alpha' & \beta' & \gamma' & \end{matrix}\right\} .$$

The special case

$$u = P \left\{ \begin{array}{cccc} 0 & \infty & 1 & \\ -\frac{1}{2}\nu & \frac{1}{2}\mu & 0 & \dfrac{1}{1-z^2} \\ \frac{1}{2}\nu+\frac{1}{2} & -\frac{1}{2}\mu & \frac{1}{2} & \end{array} \right\}$$

defines Legendre's differential equation

$$(1-z^2)\frac{d^2u}{dz^2} - 2z\frac{du}{dz} + \left[\nu(\nu+1) - \frac{\mu^2}{1-z^2}\right] u = 0$$

with solution singularities at $z = \pm 1, \infty$ as ordinary branch points. When μ and ν are integers and z is real, the equation takes the form

$$(1-x^2)\frac{d^2u}{dx^2} - 2x\frac{du}{dx} + \left[n(n+1) - \frac{m^2}{1-x^2}\right] u = 0$$

with no structural change for $m = -m$. Thus, two pairs of linearly independent solutions are possible, denoted symbolically by $P_n^m(x)$, $Q_n^m(x)$ and $P_n^{-m}(x)$, $Q_n^{-m}(x)$. The first pair is called associated Legendre functions of the first and second kinds, respectively, of order m and degree n. The second pair is related to the first by the formulas

$$P_n^{-m}(x) = \frac{(n-m)!}{(n+m)!} P_n^m(x)$$

$$Q_n^{-m}(x) = \frac{(n-m)!}{(n+m)!} Q_n^m(x) \quad .$$

The solution $P_n^m(x)$ for positive m, n is of special interest and is the subject of this report. It has a power series expansion of the form

$$P_n^m(x) = \frac{(2n)!}{2^n n!\,(n-m)!}\,(1-x^2)^{m/2}\left[x^{n-m} - \frac{(n-m)(n-m-1)}{2(2n-1)}\,x^{n-m-2}\right.$$

$$\left. + \frac{(n-m)(n-m-1)(n-m-2)(n-m-3)}{2\cdot 4\cdot (2n-1)(2n-3)}\,x^{n-m-4} \pm \cdots\right] \text{ for } m \leq n$$

which terminates as a finite polynomial with n-m real, unrepeated symmetrically located zeroes in the interval $-1 < x < 1$.

Because $P_n^m(x)$, $P_n^{-m}(x)$ share the same zeroes, they can be made to vanish simultaneously for certain n,x combinations compatible with arbitrary surface boundary conditions. Sometimes they occur together in the form $A_n P_n^m(x) + B_n P_n^{-m}(x)$. For a boundary x_o and fixed m, an n can be found that will make this term zero.

Coefficients for $P_n^m(x)$ are presented as Table 1, followed by two cross-referenced listings of zeroes (Tables 2 and 3) giving information concerning the nature and distribution of the roots. The Legendre polynomials yield root pairs of equal and opposite sign except for zero roots which occur singly. The first listing has only the positive and zero members in the interval $0 \leq x < 1$; the second is restricted to the positive nonzero members only in the interval $0 < x < 1$.

TABLE 1. ASSOCIATED LEGENDRE FUNCTIONS

The coefficients for the explicit forms of the associated Legendre functions $P_n^m(x)$ for integer values of m, n = 0, 1, ··· 25 are given in table form.

The recurrence relations were derived from the formula

$$P_{n+2}^m(x) = \frac{1}{n-m+2}\left[(2n+3)x\, P_{n+1}^m(x) - (n+m+1)P_n^m(x)\right]$$

with the help of the definition $P_n^m(x) = (1-x^2)^{\frac{m}{2}} \frac{d^{(m+n)}}{d_x^{(m+n)}}\left[\frac{(x^2-1)^n}{2^n\, n!}\right]$.

The factor $(1-x^2)^{\frac{1}{2}}$ has been omitted for m odd. For example, the table for $P_5^3(x)$ reads

P_5^3 Numerator 105
Denominator 2

k	a_k	b_k
0	-52.5	-1
2	525.	10
4	-472.5	-9

The function is $P_5^3(x) = (-52.5 + 525x^2 - 472.5x^4)(1-x^2)^{\frac{1}{2}}$ or $P_5^3(x) = \frac{105}{2}(-1 + 10x^2 - 9x^4)(1-x^2)^{\frac{1}{2}}$ where the k column gives the power of x, the a_k column gives the unfactored coefficients, and the b_k column gives the integer coefficients, the greatest common divisor (called Denominator) and the greatest common factor (called Numerator) having been taken out. The highest common factor here is $\frac{105}{2}$.

TABLE 1 (Continued)

P_0^0 Numerator 1 Denominator 1

k	a_k	b_k
0	1.	1

P_1^0 Numerator 1 Denominator 1

k	a_k	b_k
1	1.	1

P_2^0 Numerator 1 Denominator 2

k	a_k	b_k
0	-0.5	-1
2	1.5	3

P_3^0 Numerator 1 Denominator 2

k	a_k	b_k
1	-1.5	-3
3	2.5	5

P_4^0 Numerator 1 Denominator 8

k	a_k	b_k
0	0.375	3
2	-3.75	-30
4	4.375	35

P_5^0 Numerator 1 Denominator 8

k	a_k	b_k
1	1.875	15
3	-8.75	-70
5	7.875	63

P_6^0 Numerator 1 Denominator 16

k	a_k	b_k
0	-0.3125	-5
2	6.5625	105
4	-19.6875	-315
6	14.4375	231

P_7^0 Numerator 1 Denominator 16

k	a_k	b_k
1	-2.1875	-35
3	19.6875	315
5	-43.3125	-693
7	25.8125	429

P_8^0 Numerator 1 Denominator 128

k	a_k	b_k
0	0.27343 75	35
2	-9.84375	-1 260
4	54.14062 5	6 930
6	-93.84375	-12 012
8	50.27343 75	6 435

P_9^0 Numerator 1 Denominator 128

k	a_k	b_k
1	2.46093 75	315
3	-36.09375	-4 620
5	140.76562 5	18 018
7	-201.09375	-25 740
9	94.96093 75	12 155

P_{10}^0 Numerator 1 Denominator 256

k	a_k	b_k
0	-0.24609 375	-63
2	13.53515 625	3 465
4	-117.30468 75	-30 030
6	351.91406 25	90 090
8	-427.32421 875	-109 395
10	180.42578 125	46 189

P_{11}^0 Numerator 1 Denominator 256

k	a_k	b_k
1	-2.70703 125	-693
3	58.65234 375	15 015
5	-351.91406 25	-90 090
7	854.64843 75	218 790
9	-902.12890 625	-230 945
11	344.44921 875	88 179

P_{12}^0 Numerator 1 Denominator 1 024

k	a_k	b_k
0	0.22558 59375	231
2	-17.59570 3125	-18 018
4	219.94628 90625	225 225
6	-997.08984 375	-1 021 020
8	2 029.79003 90625	2 078 505
10	-1 894.47070 3125	-1 939 938
12	660.19433 59375	676 039

P_{13}^0 Numerator 1 Denominator 1 024

k	a_k	b_k
1	2.93261 71875	3 003
3	-87.97851 5625	-90 090
5	747.81738 28125	765 765
7	-2 706.38671 875	-2 771 340
9	4 736.17675 78125	4 849 845
11	-3 961.16601 5625	-4 056 234
13	1 269.60449 21875	1 300 075

P_{14}^0 Numerator 1 Denominator 2 048

k	a_k	b_k
0	-0.20947 26562 5	-429
2	21.99462 89062 5	45 045
4	-373.90869 14062 5	-765 765
6	2 368.08837 89062 5	4 849 845
8	-7 104.26513 67187 5	-14 549 535
10	10 893.20654 29687 5	22 309 287
12	-8 252.42919 92187 5	-16 900 975
14	2 448.52294 92187 5	5 014 575

P_{15}^0 Numerator 1 Denominator 2 048

k	a_k	b_k
1	-3.14208 98437 5	-6 435
3	124.63623 04687 5	255 255
5	-1 420.85302 73437 5	-2 909 907
7	7 104.26513 67187 5	14 549 535
9	-18 155.34423 82812 5	-37 182 145
11	24 757.28759 76562 5	50 702 925
13	-17 139.66064 45312 5	-35 102 025
15	4 733.81103 51562 5	9 694 845

P_{16}^0 Numerator 1 Denominator 32 768

k	a_k	b_k
0	0.19638 06152 34375	6 435
2	-26.70776 36718 75	-875 160
4	592.02209 47265 625	19 399 380
6	-4 972.98559 57031 25	-162 954 792
8	20 424.76226 80664 0625	669 278 610
10	-45 388.36059 57031 25	-1 487 285 800
12	55 703.89709 47265 625	1 825 305 300
14	-35 503.58276 36718 75	-1 163 381 400
16	9 171.75888 06152 34375	300 540 195

P_{17}^0 Numerator 1 Denominator 32 768

k	a_k	b_k
1	3.33847 04589 84375	109 395
3	-169.14916 99218 75	-5 542 680
5	2 486.49279 78515 625	81 477 396
7	-16 339.80981 44531 25	-535 422 888
9	56 735.45074 46289 0625	1 859 107 250
11	-111 407.79418 94531 25	-3 650 610 600
13	124 262.53967 28515 625	4 071 834 900
15	-73 374.07104 49218 75	-2 404 321 560
17	17 804.00253 29589 84375	583 401 555

P_{18}^0 Numerator 1 Denominator 65 536

k	a_k	b_k
0	-0.18547 05810 54687 5	-12 155
2	31.71546 93603 51562 5	2 078 505
4	-888.03314 20898 4375	-58 198 140
6	9 531.55572 50976 5625	624 660 036
8	-51 061.90567 01660 15625	-3 346 393 050
10	153 185.71701 04980 46875	10 039 179 150
12	-269 235.50262 45117 1875	-17 644 617 900
14	275 152.76641 84570 3125	18 032 411 700
16	-151 334.02153 01513 67187 5	-9 917 826 435
18	34 618.89381 40869 14062 5	2 268 783 825

TABLE 1 (Continued)

P^0_{19}

Numerator 1
Denominator 65 536

k	a_k	b_k
1	-3.52394 10400 39062 5	-230 945
3	222.00828 55224 60937 5	14 549 535
5	-4 084.95245 36132 8125	-267 711 444
7	34 041.27044 67773 4375	2 230 928 700
9	-153 185.71701 04980 46875	-10 039 179 150
11	403 853.25393 67675 78125	26 466 926 850
13	-642 023.12164 30664 0625	-42 075 627 300
15	605 336.08612 06054 6875	39 671 305 740
17	-311 570.04432 67822 26562 5	-20 419 054 425
19	67 415.74058 53271 48437 5	4 418 157 975

P^0_{20}

Numerator 1
Denominator 262 144

k	a_k	b_k
0	0.17619 70520 01953 125	46 189
2	-37.00138 09204 10156 25	-9 699 690
4	1 276.54764 17541 50390 625	334 639 305
6	-17 020.63522 33886 71875	-4 461 857 400
8	114 889.28775 78735 35156 25	30 117 537 450
10	-444 238.57933 04443 35937 5	-116 454 478 140
12	1 043 287.57266 99829 10156 25	273 491 577 450
14	-1 513 340.21530 15136 71875	-396 713 057 400
16	1 324 172.68838 88244 62890 625	347 123 925 225
18	-640 449.53556 06079 10156 25	-167 890 003 050
20	131 460.69414 13879 39453 125	34 461 632 205

P^0_{21}

Numerator 1
Denominator 262 144

k	a_k	b_k
1	3.70013 80920 41015 625	969 969
3	-283.67725 37231 44531 25	-74 364 290
5	6 382.73820 87707 51953 125	1 673 196 525
7	-65 651.02157 59277 34375	-17 210 021 400
9	370 198.81610 87036 13281 25	97 045 398 450
11	-1 251 945.08720 39794 92187 5	-328 189 892 940
13	2 648 345.37677 76489 25781 25	694 247 850 450
15	-3 531 127.16903 68652 34375	-925 663 800 600
17	2 882 022.91002 27355 95703 125	7[illegible] 505 013 725
19	-1 314 606.94141 38793 94531 25	-344 616 322 050
21	256 661.35522 84240 72265 625	67 282 234 305

P^0_{22}

Numerator 1
Denominator 524 288

k	a_k	b_k
0	-0.16818 80950 92773 4375	-88 179
2	42.55158 80584 71679 6875	22 309 287
4	-1 772.98283 57696 53320 3125	-929 553 625
6	28 722.32193 94683 83789 0625	15 058 768 725
8	-237 984.95321 27380 37109 375	-124 772 655 150
10	1 147 616.32993 69812 01171 875	601 681 470 390
12	-3 442 848.98981 09436 03515 625	-1 805 044 411 170
14	6 620 863.44194 41223 14453 125	3 471 239 252 250
16	-8 165 731.57839 77508 54492 1875	-4 281 195 077 775
18	6 244 382.97171 59271 24023 4375	3 273 855 059 475
20	-2 694 944.22989 84527 58789 0625	-1 412 926 920 405
22	501 656.28521 91925 04882 8125	263 012 370 465

P^0_{23}

Numerator 1
Denominator 524 288

k	a_k	b_k
1	-3.86832 61871 33789 0625	-2 028 117
3	354.59656 71539 30664 0625	185 910 725
5	-9 574.10731 31561 27929 6875	-5 019 589 575
7	118 992.47660 63690 18554 6875	62 386 327 575
9	-819 725.94995 49865 72265 625	-429 772 478 850
11	3 442 848.98981 09436 03515 625	1 805 044 411 170
13	-9 269 208.81872 17712 40234 375	-4 859 734 953 150
15	16 331 463.15679 55017 08984 375	8 562 390 155 550
17	-18 733 148.91514 77813 72070 3125	-9 821 565 178 425
19	13 474 721.14949 22637 93945 3125	7 064 634 602 025
21	-5 518 219.13741 11175 53710 9375	-2 893 136 075 115
23	981 501.42760 27679 44335 9375	514 589 420 475

P^0_{24}

Numerator 1
Denominator 4 194 304

k	a_k	b_k
0	0.16116 02577 97241 21093 75	676 039
2	-48.35407 73391 72363 28125	-202 811 700
4	2 393.52682 82890 31982 42187 5	111 039 179 150
6	-46 274.85201 35879 51660 15625	-194 090 796 900
8	461 095.84684 96799 46899 41406 25	1 333 976 154 825
10	-2 705 095.63485 14556 88476 5625	-11 345 993 441 640
12	10 041 642.88694 85855 10253 90625	42 117 702 927 300
14	-24 497 194.73519 32525 63476 5625	-102 748 681 866 600
16	39 807 941.44468 90354 15649 41406 25	166 966 608 033 225
18	-42 669 950.30672 55020 14160 15625	-178 970 743 251 300
20	28 970 650.47140 83671 56982 42187 5	121 511 715 154 830
22	-11 287 266.41743 18313 59863 28125	-47 342 226 683 700
24	1 922 106.96238 87538 90991 21093 75	8 061 900 920 775

P^0_{25}

Numerator 1
Denominator 4 194 304

k	a_k	b_k
1	4.02950 64449 31030 27343 75	16 900 975
3	-435.18669 60525 51269 53125	-1 825 305 300
5	13 882.45560 40763 85498 04687 5	58 227 239 070
7	-204 931.48748 87466 43066 40625	-859 544 957 700
9	1 690 684.77178 21598 05297 85156 25	7 091 245 901 025
11	-8 607 122.47452 73590 08789 0625	-36 100 888 223 400
13	28 580 060.52439 21279 90722 65625	119 873 462 177 700
15	-63 692 706.31150 24566 65039 0625	-267 146 572 853 160
17	96 007 388.19013 23795 31860 35156 25	402 684 172 315 425
19	-96 568 834.90469 45571 89941 40625	-405 039 050 516 100
21	62 079 965.29587 50724 79248 04687 5	260 384 246 760 350
23	-23 065 283.54866 50466 91894 53125	-96 742 811 049 300
25	3 767 329.64628 19576 26342 77343 75	15 801 325 804 719

TABLE 1 (Continued)

P'_1 Numerator 1, Denominator 1

k	a_k	b_k
0	1.	1

P'_2 Numerator 3, Denominator 1

k	a_k	b_k
1	3.	1

P'_3 Numerator 3, Denominator 2

k	a_k	b_k
0	-1.5	-1
2	7.5	5

P'_4 Numerator 5, Denominator 2

k	a_k	b_k
1	-7.5	-3
3	17.5	7

P'_5 Numerator 15, Denominator 8

k	a_k	b_k
0	1.875	1
2	-26.25	-14
4	39.375	21

P'_6 Numerator 21, Denominator 8

k	a_k	b_k
1	13.125	5
3	-78.75	-30
5	86.625	33

P'_7 Numerator 7, Denominator 16

k	a_k	b_k
0	-2.1875	-5
2	59.0625	135
4	-216.5625	-495
6	187.6875	429

P'_8 Numerator 9, Denominator 16

k	a_k	b_k
1	-19.6875	-35
3	216.5625	385
5	-563.0625	-1 001
7	402.1875	715

P'_9 Numerator 45, Denominator 128

k	a_k	b_k
0	2.46093 75	7
2	-108.28125	-308
4	703.82812 5	2 002
6	-1 407.65625	-4 004
8	854.64843 75	2 431

P'_{10} Numerator 55, Denominator 128

k	a_k	b_k
1	27.07031 25	63
3	-469.21875	-1 092
5	2 111.48437 5	4 914
7	-3 418.59375	-7 956
9	1 804.25781 25	4 199

P'_{11} Numerator 33, Denominator 256

k	a_k	b_k
0	-2.70703 125	-21
2	175.95703 125	1 365
4	-1 759.57031 25	-13 650
6	5 982.53906 25	46 410
8	-8 119.16015 625	-62 985
10	3 788.94140 625	29 393

P'_{12} Numerator 39, Denominator 256

k	a_k	b_k
1	-35.19140 625	-231
3	879.78515 625	5 775
5	-5 982.53906 25	-39 270
7	16 238.32031 25	106 590
9	-18 944.70703 125	-124 355
11	7 922.33203 125	52 003

P'_{13} Numerator 91, Denominator 1 024

k	a_k	b_k
0	2.93261 71875	33
2	-263.93554 6875	-2 970
4	3 739.08691 40625	42 075
6	-18 944.70703 125	-213 180
8	42 625.59082 03125	479 655
10	-43 572.82617 1875	-490 314
12	16 504.85839 84375	185 725

P'_{14} Numerator 105, Denominator 1 024

k	a_k	b_k
1	43.98925 78125	429
3	-1 495.63476 5625	-14 586
5	14 208.53027 34375	138 567
7	-56 834.12109 375	-554 268
9	108 932.06542 96875	1 062 347
11	-99 029.15039 0625	-965 770
13	34 279.32128 90625	334 305

P'_{15} Numerator 15, Denominator 2 048

k	a_k	b_k
0	-3.14208 98437 5	-429
2	373.90869 14062 5	51 051
4	-7 104.26513 67187 5	-969 969
6	49 729.85595 70312 5	6 789 783
8	-163 398.09814 45312 5	-22 309 287
10	272 330.16357 42187 5	37 182 145
12	-222 815.58837 89062 5	-30 421 755
14	71 007.16552 73437 5	9 694 845

P'_{16} Numerator 17, Denominator 2 048

k	a_k	b_k
1	-53.41552 73437 5	-6 435
3	2 368.08837 89062 5	285 285
5	-29 837.91357 42187 5	-3 594 591
7	163 398.09814 45312 5	19 684 665
9	-453 883.60595 70312 5	-54 679 625
11	668 446.76513 67187 5	80 528 175
13	-497 050.15869 14062 5	-59 879 925
15	146 748.14208 98437 5	17 678 835

P'_{17} Numerator 153, Denominator 32 768

k	a_k	b_k
0	3.33847 04589 84375	715
2	-507.44750 97656 25	-108 680
4	12 432.46398 92578 125	2 662 660
6	-114 378.66870 11718 75	-24 496 472
8	510 619.05670 16601 5625	109 359 250
10	-1 225 485.73608 39843 75	-262 462 200
12	1 615 413.01574 70703 125	345 972 900
14	-1 100 611.06567 38281 25	-235 717 800
16	302 668.04306 03027 34375	64 822 395

P'_{18} Numerator 171, Denominator 32 768

k	a_k	b_k
1	63.43093 87207 03125	12 155
3	-3 552.13256 83593 75	-680 680
5	57 189.33435 05859 375	10 958 948
7	-408 495.24536 13281 25	-78 278 200
9	1 531 857.17010 49804 6875	293 543 250
11	-3 230 826.03149 41406 25	-619 109 400
13	3 852 138.72985 83984 375	738 168 900
15	-2 421 344.34448 24218 75	-463 991 880
17	623 140.08865 35644 53125	119 409 675

TABLE 1 (Continued)

P'_{19}

Numerator 95
Denominator 65 536

k	a_k	b_k
0	-3.52394 10400 39062 5	-2 431
2	666.02485 65673 82812 5	459 459
4	-20 424.76226 80664 0625	-14 090 076
6	238 288.89312 74414 0625	164 384 220
8	-1 378 671.45309 44824 21875	-951 080 130
10	4 442 385.79330 44433 59375	3 064 591 530
12	-8 346 300.58135 98632 8125	-5 757 717 420
14	9 080 041.29180 90820 3125	6 263 890 380
16	-5 296 690.75355 52978 51562 5	-3 653 936 055
18	1 280 899.07112 12158 20312 5	883 631 595

P'_{20}

Numerator 105
Denominator 65 536

k	a_k	b_k
1	-74.00276 18408 20312 5	-46 189
3	5 106.19056 70166 01562 5	3 187 041
5	-102 123.81134 03320 3125	-63 740 820
7	919 114.30206 29882 8125	573 667 380
9	-4 442 385.79330 44433 59375	-2 772 725 670
11	12 519 450.87203 97949 21875	7 814 045 070
13	-21 186 763.01422 11914 0625	-13 223 768 580
15	21 186 763.01422 11914 0625	13 223 768 580
17	-11 528 091.64009 09423 82812 5	-7 195 285 845
19	2 629 213.88282 77587 89062 5	1 641 030 105

P'_{21}

Numerator 231
Denominator 262 144

k	a_k	b_k
0	3.70013 80920 41015 625	4 199
2	-851.03176 11694 33593 75	-965 770
4	31 913.69104 38537 59765 625	36 216 375
6	-459 557.15103 14941 40625	-521 515 800
8	3 331 789.34497 83325 19531 25	3 780 989 550
10	-13 771 395.95924 37744 14062 5	-15 628 090 140
12	34 428 489.89810 94360 35156 25	39 070 225 350
14	-52 966 907.53555 29785 15625	-60 108 039 000
16	48 994 389.47038 65051 26953 125	55 599 936 075
18	-24 977 531.88686 37084 96093 75	-28 345 065 450
20	5 389 888.45979 69055 17578 125	6 116 566 755

P'_{22}

Numerator 253
Denominator 262 144

k	a_k	b_k
1	85.10317 61169 43359 375	88 179
3	-7 091.93134 30786 13281 25	-7 348 250
5	172 333.93163 68103 02734 375	178 562 475
7	-1 903 879.62570 19042 96875	-1 972 690 200
9	11 476 163.29936 98120 11718 75	11 890 938 150
11	-41 314 187.87773 13232 42187 5	-42 807 377 340
13	92 692 088.18721 77124 02343 75	96 042 192 750
15	-130 651 705.25436 40136 71875	-135 373 757 400
17	112 398 893.49088 66882 32421 875	116 461 247 175
19	-53 898 884.59796 90551 75781 25	-55 846 913 850
21	11 036 438.27482 22351 07421 875	11 435 320 455

P'_{23}

Numerator 69
Denominator 524 288

k	a_k	b_k
0	-3.86832 61871 33789 0625	-29 393
2	1 063.78970 14617 91992 1875	8 083 075
4	-47 870.53656 57806 39648 4375	-363 738 375
6	832 947.33624 45831 29882 8125	6 329 047 725
8	-7 377 5 3.54959 48791 50390 625	-56 057 279 850
10	37 871 338.88792 03796 38671 875	287 760 703 230
12	-120 499 714.64338 30261 23046 875	-915 602 237 550
14	244 971 947.35193 25256 34765 625	1 861 389 164 250
16	-318 463 531.55751 22833 25195 3125	-2 419 805 913 525
18	256 019 731.84035 30120 84960 9375	1 945 334 165 775
20	-115 882 601.88563 34686 27929 6875	-880 519 675 035
22	22 574 532.83486 36627 19726 5625	171 529 806 825

P'_{24}

Numerator 75
Denominator 524 288

k	a_k	b_k
1	-96.70815 46783 44726 5625	-676 039
3	9 574.10731 31561 27929 6875	66 927 061
5	-277 649.11208 15277 09960 9375	-1 940 907 69
7	3 688 766.77479 74395 75195 3125	25 786 348 , 31
9	-27 050 956.34651 45568 84765 625	-189 099 890 694
11	120 499 714.64338 30261 23046 875	842 354 058 546
13	-342 960 726.29270 55358 88671 875	-2 397 469 243 554
15	63[illegible] 927 063.11502 45666 50390 625	4 452 442 880 886
17	-768 059 105.52105 90362 54882 8125	-5 369 122 297 539
19	579 413 009.42816 73431 39648 4375	4 050 390 505 161
21	-248 319 861.18350 02899 16992 1875	-1 735 881 645 069
23	45 130 567.09733 00933 83789 0625	322 476 036 631

P'_{25}

Numerator 325
Denominator 4 194 304

k	a_k	b_k
0	4.02950 64449 31030 27343 75	52 003
2	-1 305.56008 81576 53808 59375	-16 848 972
4	69 412.27802 03819 27490 23437 5	895 803 678
6	-1 434 520.41242 12265 01464 84375	-18 513 276 012
8	15 216 162.94603 94382 47680 66406 25	196 372 963 413
10	-94 673 347.21980 09490 96679 6875	-1 221 876 216 792
12	371 540 786.81709 76638 79394 53125	4 794 938 487 118
14	-955 390 594.67253 68499 75585 9375	-12 329 841 823 992
16	1 632 125 599.23225 04520 41625 97656 25	21 063 479 782 653
18	-1 834 807 863.18919 65866 08886 71875	-23 679 206 030 172
20	1 303 679 271.21337 65220 64208 98437 5	16 824 699 021 438
22	-530 501 521.61929 60739 13574 21875	-6 846 414 320 412
24	94 183 241.15704 89406 58569 33593 75	1 215 486 600 363

TABLE 1 (Continued)

P_2^2 Numerator 3 Denominator 1

k	a_k	b_k
0	3.	1
2	-3.	-1

P_3^2 Numerator 15 Denominator 1

k	a_k	b_k
1	15.	1
3	-15.	-1

P_4^2 Numerator 15 Denominator 2

k	a_k	b_k
0	-7.5	-1
2	60.	8
4	-52.5	-7

P_5^2 Numerator 105 Denominator 2

k	a_k	b_k
1	-52.5	-1
3	210.	4
5	-157.5	-3

P_6^2 Numerator 105 Denominator 8

k	a_k	b_k
0	13.125	1
2	-249.375	-19
4	669.375	51
6	-433.125	-33

P_7^2 Numerator 63 Denominator 8

k	a_k	b_k
1	118.125	15
3	-984.375	-125
5	1 992.375	253
7	-1 126.125	-143

P_8^2 Numerator 315 Denominator 16

k	a_k	b_k
0	-19.6875	-1
2	669.375	34
4	-3 465.	-176
6	5 630.625	286
8	-2 815.3125	-143

P_9^2 Numerator 495 Denominator 16

k	a_k	b_k
1	-216.5625	-7
3	3 031.875	98
5	-11 261.25	-364
7	15 283.125	494
9	-6 837.1875	-221

P_{10}^2 Numerator 495 Denominator 128

k	a_k	b_k
0	27.07031 25	7
2	-1 434.72656 25	-371
4	11 965.07812 5	3 094
6	-34 487.57812 5	-8 918
8	40 168.47656 25	10 387
10	-16 238.32031 25	-4 199

P_{11}^2 Numerator 2 145 Denominator 128

k	a_k	b_k
1	351.91406 25	21
3	-7 390.19531 25	-441
5	42 933.51562 5	2 562
7	-100 848.51562 5	-6 018
9	102 842.69531 25	6 137
11	-37 889.41406 25	-2 261

P_{12}^2 Numerator 3 003 Denominator 256

k	a_k	b_k
0	-35.19140 625	-3
2	2 674.54687 5	228
4	-32 552.05078 125	-2 775
6	143 580.9375	12 240
8	-284 170.60546 875	-24 225
10	257 648.01562 5	21 964
12	-87 145.65234 375	-7 429

P_{13}^2 Numerator 1 365 Denominator 256

k	a_k	b_k
1	-527.87109 375	-99
3	15 484.21875	2 904
5	-128 624.58984 375	-24 123
7	454 672.96875	85 272
9	-776 732.98828 125	-145 673
11	633 786.5625	118 864
13	-198 058.30078 125	-37 145

P_{14}^2 Numerator 1 365 Denominator 1 024

k	a_k	b_k
0	43.98925 78125	33
2	-4 530.89355 46875	-3 399
4	75 529.55566 40625	56 661
6	-468 881.49902 34375	-351 747
8	1 378 227.43652 34375	1 033 923
10	-2 069 709.24316 40625	-1 552 661
12	1 534 951.83105 46875	1 151 495
14	-445 631.17675 78125	-334 305

P_{15}^2 Numerator 1 785 Denominator 1 024

k	a_k	b_k
1	747.81738 28125	429
3	-29 164.87792 96875	-16 731
5	326 796.19628 90625	187 473
7	-1 605 563.92089 84375	-921 063
9	4 030 486.42089 84375	2 312 167
11	-5 397 088.69628 90625	-3 096 145
13	3 667 887.37792 96875	2 104 155
15	-994 100.31738 28125	-570 285

P_{16}^2 Numerator 765 Denominator 2 048

k	a_k	b_k
0	-53.41552 73437 5	-143
2	7 157.68066 40625	19 162
4	-156 293.83300 78125	-418 418
6	1 292 976.25488 28125	3 461 458
8	-5 228 739.14062 5	-13 997 984
10	11 437 866.87011 71875	30 620 590
12	-13 814 566.47949 21875	-36 983 310
14	8 662 874.19433 59375	23 191 590
16	-2 201 222.13134 76562 5	-5 892 945

P_{17}^2 Numerator 2 907 Denominator 2 048

k	a_k	b_k
1	-1 014.89501 95312 5	-715
3	50 744.75097 65625	35 750
5	-736 001.86816 40625	-518 518
7	4 771 224.46582 03125	3 361 358
9	-16 339 809.81445 3125	-11 511 500
11	31 639 813.54980 46875	22 290 450
13	-34 793 511.10839 84375	-24 512 250
15	20 251 243.60839 84375	14 267 130
17	-4 842 688.68896 48437 5	-3 411 705

P_{18}^2 Numerator 14 535 Denominator 32 768

k	a_k	b_k
0	63.43093 87207 03125	143
2	-10 719.82864 37988 28125	-24 167
4	296 603.06945 80078 125	668 668
6	-3 145 413.38928 22265 625	-7 091 084
8	16 646 181.24847 41210 9375	37 527 490
10	-49 325 800.87738 03710 9375	-111 201 090
12	85 616 889.83459 47265 625	193 016 460
14	-86 397 968.65539 55078 125	-194 777 340
16	46 513 546.67434 69238 28125	105 762 855
18	-10 593 381.50711 05957 03125	-23 881 935

P_{19}^2 Numerator 5 985 Denominator 32 768

k	a_k	b_k
1	1 332.04971 31347 65625	7 293
3	-83 031.09878 54003 90625	-454 597
5	1 511 432.40783 69140 625	8 275 124
7	-12 459 104.98352 05078 125	-68 213 860
9	55 453 229.55780 02929 6875	303 607 590
11	-144 579 464.90936 27929 6875	-791 575 590
13	227 276 185.06164 55078 125	1 244 341 860
15	-211 867 630.14221 19140 625	-1 159 979 700
17	107 803 235.33706 66503 90625	590 224 965
19	-23 056 183.28018 18847 65625	-126 233 085

TABLE 1 (Continued)

P^2_{20} — Numerator 21 945; Denominator 65 536

k	a_k	b_k
0	-74.00276 18408 20312 5	-221
2	15 392.57446 28906 25	45 968
4	-525 937.62840 27099 60937 5	-1 570 647
6	6 944 419.17114 25781 25	20 738 640
8	-46 415 272.25418 09082 03125	-138 613 410
10	177 695 431.73217 77343 75	530 665 200
12	-413 141 878.77731 32324 21875	-1 233 796 590
14	593 229 364.39819 33593 75	1 771 605 360
16	-513 779 003.09486 38916 01562 5	-1 534 336 785
18	245 932 621.65527 34375	734 447 040
20	-49 955 063.77372 74169 92187 5	-149 184 555

P^2_{21} — Numerator 26 565; Denominator 65 536

k	a_k	b_k
1	-1 702.06352 23388 67187 5	-4 199
3	129 356.82769 77539 0625	319 124
5	-2 884 997.67036 43798 82812 5	-7 117 305
7	29 411 657.66601 5625	72 558 720
9	-164 368 274.35226 44042 96875	-405 497 430
11	550 855 838.36975 09765 625	1 358 964 360
13	-1 154 678 584.27505 49316 40625	-2 848 598 370
15	1 525 446 937.02392 57812 5	3 763 285 920
17	-1 232 505 805.48973 08349 60937 5	-3 043 065 555
19	557 393 343.15948 48632 8125	1 375 092 420
21	-107 797 769.19593 81103 51562 5	-265 937 685

P^2_{22} — Numerator 5 313; Denominator 262 144

k	a_k	b_k
0	85.10317 61169 43359 375	4 199
2	-21 360.89720 53527 83203 125	-1 053 949
4	882 945.45221 32873 53515 625	43 564 625
6	-14 188 827.03809 73815 91796 875	-700 078 275
8	116 612 627.07424 16381 83593 75	5 753 679 750
10	-557 741 536.34937 28637 69531 25	-27 519 028 290
12	1 659 453 213.08887 48168 94531 25	81 877 602 690
14	-3 164 772 725.24929 04663 08593 75	-156 150 231 750
16	3 870 556 768.16053 39050 29296 875	190 973 693 475
18	-2 934 859 996.70648 57482 91015 625	-144 806 312 625
20	1 255 844 011.13267 89855 95703 125	61 963 480 605
22	-231 765 203.77126 69372 55859 375	-11 435 320 455

P^2_{23} — Numerator 18 975; Denominator 262 144

k	a_k	b_k
1	2 127.57940 29235 83984 375	29 393
3	-193 609.72566 60461 42578 125	-2 674 763
5	5 189 166.16373 06213 37890 625	71 689 527
7	-64 017 952.41422 65319 82421 875	-884 422 773
9	437 733 657.27596 28295 89843 75	6 047 391 402
11	-1 824 709 964.59980 01098 53281 25	-25 208 788 878
13	4 875 603 838.64765 16723 63281 25	67 357 591 182
15	-8 525 023 767.84725 18920 89843 75	-117 775 168 938
17	9 703 771 138.04655 07507 32421 875	134 059 835 637
19	-6 926 006 670.83902 35900 87890 625	-95 684 379 063
21	2 814 91 760.07966 99523 92578 125	38 880 089 547
23	-496 639 722.36700 05798 33984 375	-6 861 192 273

P^2_{24} — Numerator 22 425; Denominator 524 288

k	a_k	b_k
0	-96.70815 46783 44726 5625	-2 261
2	28 819.03009 41467 28515 625	673 778
4	-1 416 967.88234 71069 33593 75	-33 128 172
6	27 209 612.98398 97155 76171 875	636 150 438
8	-269 279 974.56021 30889 89257 8125	-6 295 663 737
10	1 568 955 468.21384 42993 16406 25	36 681 584 148
12	-5 783 986 302.88238 52539 0625	-135 227 407 392
14	14 012 395 388.53074 04663 08593 75	327 604 492 908
16	-22 610 910 740.58337 21160 86867 1875	-528 634 522 647
18	24 065 851 972.99318 31359 86328 125	562 650 497 178
20	-16 223 564 263.98868 56079 10156 25	-379 300 783 092
22	6 275 720 128.09209 82360 83984 375	146 723 957 838
24	-1 061 003 043.23859 21478 27148 4375	-24 805 848 587

P^2_{25} — Numerator 8 775; Denominator 524 288

k	a_k	b_k
1	-2 611.12017 63153 07617 1875	-156 009
3	280 260.23225 78430 17578 125	16 744 966
5	-8 884 771.58660 88867 1875	-530 846 624
7	130 336 426.04284 28649 90234 375	7 787 330 386
9	-1 068 512 775.76632 49969 48242 1875	-63 841 416 089
11	5 405 272 914.00318 14575 19531 25	322 953 814 876
13	-17 833 957 767.22068 78662 10937 5	-1 065 541 886 024
15	39 489 477 913.13152 31323 24218 75	2 359 414 176 196
17	-59 140 551 125.12154 57916 25976 5625	-3 533 524 930 859
19	59 100 126 961.67306 90002 44140 625	3 531 109 671 166
21	-37 744 618 899.89204 40673 82812 5	-2 255 162 479 064
23	13 931 431 263.39368 82019 04296 875	832 374 043 786
25	-2 260 357 787.76917 45758 05664 0625	-135 054 066 707

TABLE 1 (Continued)

P_3^3 Numerator 15, Denominator 1

k	a_k	b_k
0	15.	1
2	-15.	-1

P_4^3 Numerator 105, Denominator 1

k	a_k	b_k
1	105.	1
3	-105.	-1

P_5^3 Numerator 105, Denominator 2

k	a_k	b_k
0	-52.5	-1
2	525.	10
4	-472.5	-9

P_6^3 Numerator 315, Denominator 2

k	a_k	b_k
1	-472.5	-3
3	2 205.	14
5	-1 732.5	-11

P_7^3 Numerator 315, Denominator 8

k	a_k	b_k
0	118.125	3
2	-2 716.875	-69
4	8 229.375	209
6	-5 630.625	-143

P_8^3 Numerator 3 465, Denominator 8

k	a_k	b_k
1	1 299.375	3
3	-12 500.625	-29
5	28 153.125	65
7	-16 891.875	-39

P_9^3 Numerator 3 465, Denominator 16

k	a_k	b_k
0	-216.5625	-1
2	8 662.5	40
4	-50 675.625	-234
6	90 090.	416
8	-47 860.3125	-221

P_{10}^3 Numerator 6 435, Denominator 16

k	a_k	b_k
1	-2 815.3125	-7
3	45 045.	112
5	-185 810.625	-462
7	273 487.5	680
9	-129 906.5625	-323

P_{11}^3 Numerator 45 045, Denominator 128

k	a_k	b_k
0	351.91406 25	1
2	-21 466.75781 25	-61
4	200 591.01562 5	570
6	-634 149.14062 5	-1 802
8	795 677.69531 25	2 261
10	-341 004.72656 25	-969

P_{12}^3 Numerator 15 015, Denominator 128

k	a_k	b_k
1	5 278.71093 75	45
3	-124 929.49218 75	-1 065
5	801 660.23437 5	6 834
7	-2 046 028.35937 5	-17 442
9	2 235 475.42968 75	19 057
11	-871 456.52343 75	-7 429

P_{13}^3 Numerator 15 015, Denominator 256

k	a_k	b_k
0	-527.87109 375	-9
2	45 396.91406 25	774
4	-613 210.25390 625	-10 455
6	2 955 374.29687 5	50 388
8	-6 308 587.44140 625	-107 559
10	6 100 195.66406 25	104 006
12	-2 178 641.30859 375	-37 145

P_{14}^3 Numerator 23 205, Denominator 256

k	a_k	b_k
1	-8 973.80859 375	-99
3	293 144.41406 25	3 234
5	-2 671 203.69140 625	-29 469
7	10 230 141.79687 5	112 860
9	-18 736 315.25390 625	-206 701
11	16 240 780.66406 25	179 170
13	-5 347 574.12109 375	-58 995

P_{15}^3 Numerator 69 615, Denominator 1 024

k	a_k	b_k
0	747.81738 28125	11
2	-85 998.99902 34375	-1 265
4	1 577 146.86035 15625	23 199
6	-10 642 189.17480 46875	-156 541
8	33 660 008.21777 34375	495 121
10	-53 921 372.38769 53125	-793 155
12	42 334 961.79199 21875	622 725
14	-12 923 304.12597 65625	-190 095

P_{16}^3 Numerator 101 745, Denominator 1 024

k	a_k	b_k
1	14 298.53027 34375	143
3	-610 966.80175 78125	-6 149
5	7 459 478.39355 46875	75 075
7	-39 542 339.75097 65625	-397 969
9	106 208 763.79394 53125	1 068 925
11	-151 068 968.92089 84375	-1 520 415
13	108 356 934.59472 65625	1 090 545
15	-30 817 109.83886 71875	-310 155

P_{17}^3 Numerator 14 535, Denominator 2 048

k	a_k	b_k
0	-1 014.89501 95312 5	-143
2	150 204.46289 0625	21 164
4	-3 580 549.62890 625	-504 504
6	32 026 027.23632 8125	4 512 508
8	-138 888 383.42265 15625	-19 569 550
10	323 528 234.32617 1875	45 585 540
12	-413 545 732.03125	-58 269 120
14	272 951 544.28710 9375	38 459 220
16	-72 640 330.33447 26562 5	-10 235 115

P_{18}^3 Numerator 101 745, Denominator 2 048

k	a_k	b_k
1	-21 312.79541 01562 5	-429
3	1 165 099.48242 1875	23 452
5	-18 300 586.99218 75	-368 368
7	127 450 516.55273 4375	2 565 420
9	-465 684 579.71191 40625	-9 373 650
11	956 324 505.32226 5625	19 249 620
13	-1 109 415 954.19921 875	-22 331 160
15	677 976 416.45507 8125	13 646 820
17	-169 494 104.11376 95312 5	-3 411 705

P_{19}^3 Numerator 1 119 195, Denominator 32 768

k	a_k	b_k
0	1 332.04971 31347 65625	39
2	-246 429.19692 99316 40625	-7 215
4	7 393 763.94104 00390 625	216 476
6	-84 354 268.16711 42578 125	-2 469 740
8	477 020 322.77069 09179 6875	13 966 290
10	-1 501 526 398.13690 18554 6875	-43 961 970
12	2 754 279 191.84875 48828 125	80 640 300
14	-2 923 773 295.96252 44140 625	-85 602 780
16	1 663 160 896.61636 35253 90625	48 694 335
18	-391 955 115.76309 20410 15625	-11 475 735

TABLE 1 (Continued)

P^3_{20}

Numerator 1 514 205
Denominator 32 768

k	a_k	b_k
1	30 637.14340 20996 09375	663
3	-2 073 113.37020 87402 34375	-44 863
5	40 645 276.91345 21484 375	879 580
7	-358 454 577.80456 54296 875	-7 757 100
9	1 696 991 373.04229 73632 8125	36 723 570
11	-4 682 274 626.14288 33007 8125	-101 326 290
13	7 754 355 263.20495 60546 875	167 807 340
15	-7 584 861 159.09118 65234 375	-164 139 420
17	4 034 832 074.03182 98339 84375	87 315 375
19	-899 191 147.92709 35058 59375	-19 458 855

P^3_{21}

Numerator 504 735
Denominator 65 536

k	a_k	b_k
0	-1 702.06352 23388 67187 5	-221
2	384 666.35604 85839 84375	49 946
4	-14 169 678.82347 10693 35937 5	-1 839 825
6	200 366 917.84973 14453 125	26 016 120
8	-1 426 005 839.65072 63123 59375	-185 156 010
10	5 783 986 302.88238 52539 0625	751 006 620
12	-14 184 537 838.02108 76464 84375	-1 841 754 330
14	21 398 630 644.36340 33203 125	2 778 449 400
16	-19 401 778 230.27305 60302 73437 5	-2 519 173 305
18	9 691 282 372.10311 88964 84375	1 258 339 290
20	-2 048 157 614.72282 40966 79687 5	-265 937 685

P^3_{22}

Numerator 132 825
Denominator 65 536

k	a_k	b_k
1	-42 551.58805 84716 79687 5	-20 995
3	3 489 230.22079 46777 34375	1 721 590
5	-83 409 622.91221 61865 23437 5	-41 154 399
7	906 246 701.83410 64453 125	447 143 112
9	-5 370 844 424.10507 20214 84375	-2 649 980 502
11	19 004 526 423.75840 86914 0625	9 376 854 084
13	-41 896 823 860.62240 60058 59375	-20 671 938 630
15	58 009 357 132.93762 20703 125	28 621 880 136
17	-49 005 917 562.02659 60693 35937 5	-24 179 573 223
19	23 068 722 607.93075 56152 34375	11 382 132 918
21	-4 635 304 075.42533 87451 17187 5	-2 287 064 091

P^3_{23}

Numerator 1 726 725
Denominator 262 144

k	a_k	b_k
0	2 127.57940 29235 83984 375	323
2	-576 574.01819 22912 59765 625	-87 533
4	25 562 866.52612 68615 72265 625	3 880 845
6	-438 130 298.86465 07263 18359 375	-66 515 067
8	3 821 562 378.69014 73999 02343 75	580 173 246
10	-19 314 382 832.83939 36157 22656 25	-2 932 226 946
12	60 490 856 750.97827 91137 69531 25	9 183 463 002
14	-121 016 141 991.85466 76635 74218 75	-18 372 152 790
16	154 773 276 336.95096 96960 44921 875	23 497 016 463
18	-122 377 417 479.68873 97766 11328 125	-18 578 815 809
20	54 464 822 886.24773 02551 26953 125	8 268 616 329
22	-10 429 434 169.70701 21745 13671 875	-1 583 352 063

P^3_{24}

Numerator 2 220 075
Denominator 262 144

k	a_k	b_k
1	57 444.64387 89367 67578 125	6 783
3	-5 610 426.88550 94909 66796 875	-662 473
5	160 481 186.78312 30162 57421 875	18 949 441
7	-2 102 597 061.63454 05578 61328 125	-248 272 335
9	15 202 637 467.86518 09692 38281 25	1 795 110 614
11	-66 756 841 912.43419 64721 67968 75	-7 882 574 042
13	187 256 556 555.81722 25952 14843 75	22 111 047 042
15	-342 666 759 955.88321 68579 10156 25	-40 461 711 934
17	407 071 325 926.16128 92150 87890 625	48 066 531 835
19	-302 453 590 921.50335 31188 96484 375	-35 713 385 421
21	127 636 408 648.31914 90173 33984 375	15 071 165 933
23	-23 342 066 951.24902 72521 97265 625	-2 756 205 443

P^3_{25}

Numerator 1 412 775
Denominator 524 288

k	a_k	b_k
0	-2 611.12017 63153 07617 1875	-969
2	835 558.45642 08984 375	310 080
4	-43 868 559.70888 13781 73828 125	-16 279 846
6	895 140 737.35084 53369 14062 5	332 191 288
8	-9 373 156 374.76029 39605 71289 0625	-3 478 426 083
10	57 564 435 109.63897 70507 8125	21 362 455 136
12	-222 924 472 090.25859 83276 36718 75	-82 728 407 300
14	565 591 232 046.14181 51855 46875	209 893 787 664
16	-953 161 349 951.63426 39923 09570 3125	-353 723 032 927
18	1 056 849 329 196.97723 38867 1875	392 202 170 272
20	-740 489 826 049.19786 45324 70703 125	-274 799 546 934
22	297 080 852 106.80580 13916 01562 5	110 248 217 720
24	-51 989 149 118.69101 52435 30273 4375	-19 293 438 101

TABLE 1 (Continued)

P_4^4 Numerator 105 / Denominator 1

k	a_k	b_k
0	105.	1
2	-210.	-2
4	105.	1

P_5^4 Numerator 945 / Denominator 1

k	a_k	b_k
1	945.	1
3	-1 890.	-2
5	945.	1

P_6^4 Numerator 945 / Denominator 2

k	a_k	b_k
0	-472.5	-1
2	6 142.5	13
4	-10 867.5	-23
6	5 197.5	11

P_7^4 Numerator 3 465 / Denominator 2

k	a_k	b_k
1	-5 197.5	-3
3	32 917.5	19
5	-50 242.5	-29
7	22 522.5	13

P_8^4 Numerator 10 395 / Denominator 8

k	a_k	b_k
0	1 299.375	1
2	-36 382.5	-28
4	153 326.25	118
6	-202 702.5	-156
8	84 459.375	65

P_9^4 Numerator 135 135 / Denominator 8

k	a_k	b_k
1	16 891.875	1
3	-202 702.5	-12
5	641 891.25	38
7	-743 242.5	-44
9	287 161.875	17

P_{10}^4 Numerator 45 045 / Denominator 16

k	a_k	b_k
0	-2 815.3125	-1
2	132 319.6875	47
4	-974 098.125	-346
6	2 471 844.375	878
8	-2 536 596.5625	-901
10	909 345.9375	323

P_{11}^4 Numerator 135 135 / Denominator 16

k	a_k	b_k
1	-42 229.6875	-5
3	802 364.0625	95
5	-4 206 076.875	-498
7	8 902 018.125	1 054
9	-8 184 113.4375	-969
11	2 728 037.8125	323

P_{12}^4 Numerator 135 135 / Denominator 128

k	a_k	b_k
0	5 278.71093 75	5
2	-369 509.76562 5	-350
4	4 133 230.66406 25	3 915
6	-16 727 179.21875	-15 844
8	30 349 420.66406 25	28 747
10	-25 234 349.76562 5	-23 902
12	7 843 108.71093 75	7 429

P_{13}^4 Numerator 255 255 / Denominator 128

k	a_k	b_k
1	89 738.08593 75	45
3	-2 452 841.01562 5	-1 230
5	18 958 666.28906 25	9 507
7	-62 290 196.71875	-31 236
9	98 853 481.28906 25	49 571
11	-74 945 261.01562 5	-37 582
13	21 786 413.08593 75	10 925

P_{14}^4 Numerator 2 297 295 / Denominator 256

k	a_k	b_k
0	-8 973.80859 375	-1
2	870 459.43359 375	97
4	-13 649 162.87109 375	-1 521
6	79 624 603.65234 375	8 873
8	-219 777 546.26953 125	-24 491
10	309 802 794.08203 125	34 523
12	-215 685 489.55078 125	-24 035
14	58 823 315.33203 125	6 555

P_{15}^4 Numerator 3 968 055 / Denominator 256

k	a_k	b_k
1	-170 502.36328 125	-11
3	6 308 587.44140 625	407
5	-67 007 428.76953 125	-4 323
7	311 848 822.44140 625	20 119
9	-741 173 773.18359 375	-47 817
11	939 390 520.60546 875	60 605
13	-604 275 875.68359 375	-38 985
15	155 079 649.51171 875	10 005

P_{16}^4 Numerator 1 322 685 / Denominator 1 024

k	a_k	b_k
0	14 208.53027 34375	11
2	-1 818 691.875	-1 408
4	37 908 358.76953 125	29 348
6	-299 174 813.4375	-231 616
8	1 153 590 572.90039 0625	893 090
10	-2 405 220 004.6875	-1 862 080
12	2 768 260 870.01953 125	2 143 140
14	-1 654 182 928.125	-1 280 640
16	400 622 427.90527 34375	310 155

P_{17}^4 Numerator 305 235 / Denominator 1 024

k	a_k	b_k
1	298 379.13574 21875	1 001
3	-14 322 198.51562 5	-48 048
5	199 317 262.67578 125	668 668
7	-1 239 211 176.32812 5	-4 157 296
9	4 068 612 643.79882 8125	13 649 350
11	-7 550 774 658.98437 5	-25 331 280
13	7 956 778 940.33203 125	26 693 340
15	-4 437 663 816.79687 5	-14 887 440
17	1 016 964 624.68261 71875	3 411 705

P_{18}^4 Numerator 3 357 585 / Denominator 2 048

k	a_k	b_k
0	-21 312.79541 01562 5	-13
2	3 473 985.65185 54687 5	2 119
4	-92 668 034.44335 9375	-56 524
6	947 055 376.84570 3125	577 668
8	-4 828 413 800.17089 84375	-2 945 150
10	13 779 361 616.52832 03125	8 404 890
12	-23 029 327 952.49023 4375	-14 047 020
14	22 373 221 743.01757 8125	13 646 820
16	-11 695 093 183.85009 76562 5	-7 133 565
18	2 542 411 561.70654 29687 5	1 550 775

P_{19}^4 Numerator 25 741 485 / Denominator 2 048

k	a_k	b_k
1	-490 194.29443 35937 5	-39
3	29 575 055.76416 01562 5	2 353
5	-520 913 136.88476 5625	-41 444
7	4 153 579 654.83398 4375	330 460
9	-17 877 385 917.99316 40625	-1 422 330
11	45 063 561 487.28027 34375	3 585 270
13	-68 475 618 061.96289 0625	-5 447 940
15	61 695 853 897.41210 9375	4 908 540
17	-30 339 444 636.36474 60937 5	-2 413 815
19	6 271 281 852.20947 26562 5	498 945

TABLE 1 (Continued)

P^4_{20} — Numerator 77 224 455; Denominator 32 768

k	a_k	b_k
0	30 637.14340 20996 09375	13
2	−6 188 702.96722 41210 9375	−2 626
4	205 299 497.93746 94824 21875	87 113
6	−2 631 117 875.37231 44531 25	−1 116 440
8	17 065 195 246.40350 34179 6875	7 241 130
10	−63 383 960 498.86779 78515 625	−26 895 180
12	142 947 090 056.95037 84179 6875	60 655 530
14	−199 070 825 281.62231 44531 25	−84 470 040
16	167 195 340 326.72653 19824 21875	70 944 585
18	−77 607 112 921.09222 41210 9375	−32 930 370
20	15 286 249 514.76058 95996 09375	6 486 285

P^4_{21} — Numerator 22 713 075; Denominator 32 768

k	a_k	b_k
1	765 928.58505 24902 34375	1 105
3	−56 678 715.29388 42773 4375	−81 770
5	1 230 540 864.74533 08105 46875	1 775 293
7	−12 209 514 388.60473 63281 25	−17 614 584
9	66 395 898 066.72821 04492 1875	95 788 914
11	−216 486 344 479.31213 37890 625	−312 323 388
1'	441 426 207 401.29852 29492 1875	636 842 610
1	−567 212 019 416.72973 63281 25	−818 312 952
17	446 067 977 921.67892 45605 46875	643 539 261
19	−196 023 670 248.10638 42773 4375	−282 802 026
21	36 866 837 065.01083 37402 34375	53 187 537

P^4_{22} — Numerator 32 807 775; Denominator 65 536

k	a_k	b_k
0	−42 551.58805 84716 79687 5	−85
2	10 425 139.07432 55615 23437 5	20 825
4	−420 537 344.78187 56103 51562 5	−840 055
6	6 593 955 781.57539 36767 57812 5	13 171 923
8	−52 868 833 326.11618 04199 21875	−105 609 474
10	246 645 701 630.05599 97558 59375	492 693 354
12	−715 699 448 001.89895 62988 28125	−1 429 663 518
14	1 331 005 419 460.91079 71191 40625	2 658 783 510
16	−1 587 222 241 282.64122 00927 73437 5	−3 170 595 897
18	1 173 394 492 981.08329 77294 92187 5	2 343 943 821
20	−489 509 669 918.75495 91064 45312 5	−977 832 411
22	88 070 777 433.08143 61572 26562 5	175 928 007

P^4_{23} — Numerator 46 621 575; Denominator 65 536

k	a_k	b_k
1	−1 148 892.87757 87353 51562 5	−1 615
3	102 251 466.10450 74462 89062 5	143 735
5	−2 679 907 526.24015 80810 54687 5	−3 767 149
7	32 325 020 224.97978 21044 92187 5	45 439 317
9	−216 073 202 600.53482 05566 40625	−303 734 342
11	880 405 343 674.45449 82910 15625	1 237 586 774
13	−2 299 134 555 395.74813 84277 34375	−3 231 896 010
15	3 928 566 125 293.47152 70996 09375	5 522 389 786
17	−4 369 619 383 351.71089 17236 32812 5	−6 142 378 843
19	3 047 335 137 399.97444 15283 20312 5	4 283 642 403
21	−1 209 814 363 686.01341 24755 85937 5	−1 700 637 401
23	208 588 683 394.14024 35302 73437 5	293 213 345

P^4_{24} — Numerator 46 621 575; Denominator 262 144

k	a_k	b_k
0	57 444.64387 89367 67578 125	323
2	−16 773 836.01264 95361 32812 5	−94 316
4	808 016 360.80112 45727 53906 25	4 543 318
6	−15 199 622 991.79115 29541 01562 5	−85 464 508
8	147 336 722 518.95933 15124 51171 875	828 445 581
10	−840 743 723 311.83242 79785 15625	−4 727 337 560
12	3 035 146 812 437.53166 19873 04687 5	17 066 037 044
14	−7 199 823 521 452.23770 14160 15625	−40 483 199 832
16	11 374 880 420 171.22373 58093 26171 875	63 958 728 397
18	−11 852 688 116 400.98304 74853 51562 5	−66 645 347 644
20	7 822 075 627 280.25913 23852 53906 25	43 982 001 750
22	−2 961 959 304 196.79145 81298 82812 5	−16 654 517 996
24	490 183 405 976.22957 22961 42578 125	2 756 205 443

P^4_{25} — Numerator 450 675 225; Denominator 262 144

k	a_k	b_k
1	1 665 894.67248 91662 59765 625	969
3	−175 474 238.83552 55126 95312 5	−102 068
5	5 458 581 543.52283 47778 32031 25	3 175 090
7	−78 565 813 947.48573 30322 26562 5	−45 699 332
9	631 883 289 344.95153 42712 40234 375	367 547 191
11	−3 135 609 145 960.21499 63378 90625	−1 823 887 976
13	10 147 521 969 548.57139 58740 23437 5	5 902 503 292
15	−22 037 676 383 779.85000 61035 15625	−12 818 642 600
17	32 367 546 824 868.46990 58532 71484 375	18 827 212 423
19	−31 719 385 788 135.59303 28369 14062 5	−18 450 196 964
21	19 864 595 615 235.28919 21997 07031 25	11 554 627 954
23	−7 189 356 620 984.70039 36767 57812 5	−4 181 828 948
25	1 143 761 280 611.20233 53576 66015 625	665 290 969

TABLE 1 (Continued)

P_5^5 Numerator 945, Denominator 1

k	a_k	b_k
0	945.	1
2	-1 890.	-2
4	945.	1

P_6^5 Numerator 10 395, Denominator 1

k	a_k	b_k
1	10 395.	1
3	-20 790.	-2
5	10 395.	1

P_7^5 Numerator 10 395, Denominator 2

k	a_k	b_k
0	-5 197.5	-1
2	77 962.5	15
4	-140 332.5	-27
6	67 567.5	13

P_8^5 Numerator 135 135, Denominator 2

k	a_k	b_k
1	-67 567.5	-1
3	472 972.5	7
5	-743 242.5	-11
7	337 837.5	5

P_9^5 Numerator 135 135, Denominator 8

k	a_k	b_k
0	16 891.875	1
2	-540 540.	-32
4	2 466 213.75	146
6	-3 78 375.	-200
8	1 435 809.375	85

P_{10}^5 Numerator 135 135, Denominator 8

k	a_k	b_k
1	253 378.125	15
3	-3 378 375.	-200
5	11 452 691.25	678
7	-13 183 770.	-816
9	5 456 075.625	323

P_{11}^5 Numerator 135 135, Denominator 16

k	a_k	b_k
0	-42 229.6875	-5
2	2 238 173.4375	265
4	-17 989 846.875	-2 130
6	48 530 356.875	5 746
8	-51 832 718.4375	-6 137
10	19 096 264.6875	2 261

P_{12}^5 Numerator 2 297 295, Denominator 16

k	a_k	b_k
1	-717 904.6875	-5
3	15 075 998.4375	105
5	-85 287 076.875	-594
7	190 962 646.875	1 330
9	-182 778 533.4375	-1 273
11	62 744 869.6875	437

P_{13}^5 Numerator 2 297 295, Denominator 128

k	a_k	b_k
0	89 738.08593 75	5
2	-6 999 570.70312 5	-390
4	85 340 919.72656 25	4 755
6	-369 649 123.59375	-20 596
8	706 902 798.16406 25	39 387
10	-611 762 479.45312 5	-34 086
12	196 077 717.77343 75	10 925

P_{14}^5 Numerator 43 648 605, Denominator 128

k	a_k	b_k
1	1 705 023.63281 25	5
3	-51 150 708.98437 5	-150
5	426 596 912.92968 75	1 251
7	-1 490 872 664.53125	-4 372
9	2 486 265 461.36718 75	7 291
11	-1 960 777 177.73437 5	-5 750
13	588 233 153.32031 25	1 725

P_{15}^5 Numerator 43 648 605, Denominator 256

k	a_k	b_k
0	-170 502.36328 125	-1
2	18 243 752.87109 375	107
4	-310 484 803.53515 625	-1 821
6	1 939 464 382.32421 875	11 375
8	-5 666 646 043.65234 375	-33 235
10	8 372 518 548.92578 125	49 105
12	-6 058 801 479.19921 875	-35 535
14	1 705 876 144.62890 625	10 005

P_{16}^5 Numerator 3 968 055, Denominator 256

k	a_k	b_k
1	-3 580 549.62890 625	-231
3	144 415 501.69921 875	9 317
5	-1 650 633 378.92578 125	-106 491
7	8 176 440 831.15234 375	527 505
9	-20 490 121 507.32421 875	-1 321 925
11	27 160 328 961.03515 625	1 752 255
13	-18 144 318 992.87109 375	-1 170 585
15	4 807 469 134.86328 125	310 155

P_{17}^5 Numerator 43 648 605, Denominator 1 024

k	a_k	b_k
0	298 379.13574 21875	7
2	-41 773 079.00390 625	-980
4	940 491 035.85937 5	22 064
6	-7 933 304 461.11328 125	-186 116
8	32 401 842 862.06054 6875	760 150
10	-70 999 741 605.76171 875	-1 665 660
12	85 293 807 231.44531 25	2 001 000
14	-52 832 160 483.49609 375	-1 240 620
16	13 220 540 120.87402 34375	310 155

P_{18}^5 Numerator 77 224 455, Denominator 1 024

k	a_k	b_k
1	6 862 720.12207 03125	91
3	-356 861 446.34765 625	-4 732
5	5 325 470 814.72656 25	70 616
7	-35 195 950 340.33203 125	-466 700
9	121 911 321 025.63476 5625	1 616 550
11	-237 116 784 103.41796 875	-3 144 180
13	260 342 943 918.75	3 452 160
15	-150 510 764 453.02734 375	-1 995 780
17	35 593 761 863.89160 15625	471 975

P_{19}^5 Numerator 77 224 455, Denominator 2 048

k	a_k	b_k
0	-490 194.29443 35937 5	-13
2	86 764 390.11474 60937 5	2 301
4	-2 488 226 238.54492 1875	-65 988
6	27 107 744 482.17773 4375	718 900
8	-146 249 467 744.26269 53125	-3 878 550
10	438 836 638 205.78613 28125	11 637 990
12	-766 791 327 010.69335 9375	-20 335 380
14	774 927 044 008.15429 6875	20 551 140
16	-419 497 907 681.57958 98437 5	-11 125 125
18	94 069 227 783.14208 98437 5	2 494 725

TABLE 1 (Continued)

P^5_{20} — Numerator 386 [illegible] 275; Denominator 2 048

k	a_k	b_k
1	-12 25[illegible] 857.36083 98437 5	-65
3	796 56[illegible] [illegible]8.45458 98437 5	4 225
5	-14 990 141 [illegible].77929 6875	-79 508
7	126 793 656 [illegible].19335 9375	672 516
[illegible]	-575 306 729 776.[illegible]963 28125	-3 051 438
11	1 520 362 113 900.5 269 53125	8 064 030
13	-2 410 206 160 497.8027[illegible] 4375	-12 783 780
15	255 627 537 546.044[illegible] 1875	11 903 892
17	[illegible] 147 644 578 954.33349 6[illegible]37 5	-6 087 [illegible]
19	244 579 992 236.16943 35537 5	1 297 257

P^5_{21} — Numerator 5 019 589 575; Denominator 32 768

k	a_k	b_k
0	765 928.58505 [illegible] 34375	5
2	-166 972 431.[illegible]4144 28710 [illegible]75	-1 090
4	5 929 053 176.[illegible]32 69042 96875	38 705
6	-80 765 089 408.08715 82031 25	-527 256
8	533 423 537 358.28094 [illegible] 1875	3 612 762
[illegible]	[illegible] 742 [illegible].79357 [illegible]	-14 099 916
12	5 094 039 365 324.27215 57617 [illegible]	33 254 010
14	-7 386 976 792 538.36059 57031 25	-48 222 360
16	6 435 511 045 714.20822 14355 46875	42 011 169
18	-3 087 822 401 981.63909 91210 9375	-20 157 378
20	626 736 230 105.18417 35839 84375	4 091 349

P^5_{22} — Numerator 885 809 925; Denominator 32 768

k	a_k	b_k
1	20 683 071.79641 72363 28125	765
3	-1 640 619 029.18243 40820 3125	-60 690
5	37 923 115 660.26992 79785 15625	402 857
7	-398 215 462 511.81030 27343 75	-14 730 840
9	2 279 716 887 093.21441 65039 0625	84 331 594
11	-7 788 550 698 709.90905 76171 875	-288 115 116
13	16 571 120 757 758.03375 24414 0625	613 001 130
15	-22 134 489 297 373.33374 02343 75	-818 802 008
17	18 033 278 471 677.86026 00097 65625	667 089 465
19	-8 184 437 828 432.40509 03320 3125	-302 759 826
21	1 585 273 993 795.46585 08300 78125	58 642 669

P^5_{23} — Numerator 885 809 925; Denominator 65 536

k	a_k	b_k
0	-1 148 892.87757 87353 51562 5	-85
2	302 158 826.80320 73974 60937 5	22 355
4	-12 995 127 338.29307 55615 23437 5	-961 435
6	215 959 921 762.80555 72509 76562 5	15 977 637
8	-1 825 673 962 316.94717 40722 65625	-135 071 154
10	8 939 150 831 104.72640 99121 09375	661 356 542
12	-27 112 435 794 761.18087 76855 46875	-2 005 893 750
14	52 508 267 083 202.62527 46582 03125	3 884 785 770
16	-64 989 489 812 004.64668 27392 57812 5	-4 808 199 913
18	49 714 929 782 167.10929 87060 54687 5	3 678 122 751
20	-21 401 198 916 238.78898 62060 54687 5	-1 583 352 063
22	3 963 184 984 488.66462 70751 95312 5	293 213 345

P^5_{24} — Numerator 1 352 025 675; Denominator 65 536

k	a_k	b_k
1	-33 317 893.44978 33251 95312 5	-1 615
3	3 165 199 877.72941 58935 54687 5	153 425
5	-88 032 538 073.01750 18310 54687 5	-4 267 153
7	1 121 060 488 062.23945 61767 57812 5	54 340 551
9	-7 875 723 635 131.92214 96582 03125	-381 755 638
11	33 590 500 453 989.45236 20605 46875	1 628 213 930
13	-91 488 203 345 842.12875 36621 09375	-4 434 657 570
15	162 508 118 591 419.82803 34472 65625	7 877 167 022
17	-187 338 832 545 852.55165 10009 76562 5	-9 080 772 619
19	135 040 313 629 366.39366 14990 23437 5	6 545 735 157
21	-55 276 001 099 447.16453 55224 60937 5	-2 679 363 325
23	9 803 668 119 524.59144 59228 51562 5	475 207 835

P^5_{25} — Numerator 1 352 025 675; Denominator 262 144

k	a_k	b_k
0	1 665 894.67248 91662 59765 625	323
2	-519 759 137.81661 98730 46875	-100 776
4	26 597 674 340.96202 85034 17968 75	5 157 018
6	-528 821 604 834.96093 75	-102 533 120
8	5 393 825 441 112.06007 00378 41796 875	1 045 807 785
10	-32 257 291 611 175.06256 10351 5625	-6 254 360 112
12	121 609 758 014 677.87055 96923 82812 5	23 578 892 764
14	-300 283 085 467 957.02209 47265 625	-58 221 830 112
16	492 379 650 776 385.31637 19177 24609 375	95 467 396 485
18	-531 066 787 921 481.06002 80761 71875	-102 968 438 120
20	361 880 506 820 493.90850 06713 86718 75	70 164 942 378
22	-141 172 820 921 154.11682 12890 625	-27 371 971 296
24	24 018 986 892 835.24904 25109 86328 125	4 657 036 783

TABLE 1 (Continued)

P_6^6 Numerator 10 395 / Denominator 1

k	a_k	b_k
0	10 395.	1
2	-31 185.	-3
4	31 185.	3
6	-10 395.	-1

P_7^6 Numerator 135 135 / Denominator 1

k	a_k	b_k
1	135 135.	1
3	-405 405.	-3
5	405 405.	3
7	-135 135.	-1

P_8^6 Numerator 135 135 / Denominator 2

k	a_k	b_k
0	-67 567.5	-1
2	1 216 215.	18
4	-3 243 240.	-48
6	3 108 105.	46
8	-1 013 512.5	-15

P_9^6 Numerator 675 675 / Denominator 2

k	a_k	b_k
1	-1 013 512.5	-3
3	8 783 775.	26
5	-20 270 250.	-60
7	18 243 225.	54
9	-5 743 237.5	-17

P_{10}^6 Numerator 675 675 / Denominator 8

k	a_k	b_k
0	253 378.125	3
2	-9 374 990.625	-111
4	53 885 081.25	638
6	-107 939 081.25	-1 278
8	90 455 990.625	1 071
10	-27 280 378.125	-323

P_{11}^6 Numerator 2 297 295 / Denominator 8

k	a_k	b_k
1	4 307 428.125	15
3	-67 483 040.625	-235
5	291 182 141.25	1 014
7	-511 722 461.25	-1 782
9	398 293 520.625	1 387
11	-114 577 588.125	-399

P_{12}^6 Numerator 2 297 295 / Denominator 16

k	a_k	b_k
0	-717 904.6875	-5
2	43 074 281.25	300
4	-411 359 385.9375	-2 865
6	1 422 025 605.	9 904
8	-2 217 894 741.5625	-15 447
10	1 604 086 233.75	11 172
12	-439 214 087.8125	-3 059

P_{13}^6 Numerator 43 648 605 / Denominator 16

k	a_k	b_k
1	-13 640 189.0625	-5
3	327 364 537.5	120
5	-2 217 894 741.5625	-813
7	6 394 520 632.5	2 344
9	-8 945 235 987.1875	-3 279
11	6 023 507 490.	2 208
13	-1 568 621 742.1875	-575

P_{14}^6 Numerator 218 243 025 / Denominator 128

k	a_k	b_k
0	1 705 023.63281 25	1
2	-148 337 056.05468 75	-87
4	2 081 833 855.66406 25	1 221
6	-10 862 705 564.64843 75	-6 371
8	26 849 007 145.89843 75	15 747
10	-33 999 876 261.91406 25	-19 941
12	21 372 471 237.30468 75	12 535
14	-5 294 098 379.88281 25	-3 105

P_{15}^6 Numerator 218 243 025 / Denominator 128

k	a_k	b_k
1	35 805 496.28906 25	21
3	-1 205 451 708.39843 75	-707
5	11 636 786 293.94531 25	6 825
7	-49 212 097 113.86718 75	-28 863
9	106 391 769 663.86718 75	62 399
11	-122 940 729 043.94531 25	-72 105
13	72 352 677 858.39843 75	42 435
15	-17 058 761 446.28906 25	-10 005

P_{16}^6 Numerator 43 648 605 / Denominator 256

k	a_k	b_k
0	-3 580 549.62890 625	-21
2	422 504 856.21093 75	2 478
4	-8 108 751 392.92968 75	-47 558
6	58 885 719 196.99218 75	345 366
8	-208 940 416 059.375	-1 225 440
10	401 214 226 108.00781 25	2 353 130
12	-425 998 449 634.57031 25	-2 498 490
14	235 410 907 958.78906 25	1 380 690
16	-52 882 160 483.49609 375	-310 155

P_{17}^6 Numerator 1 003 917 915 / Denominator 256

k	a_k	b_k
1	-82 352 641.46484 375	-21
3	3 678 417 985.42968 75	938
5	-47 599 826 766.67968 75	-12 138
7	275 081 351 818.71093 75	70 146
9	-839 604 787 505.85937 5	-214 100
11	1 449 524 136 411.91406 25	369 630
13	-1 422 700 704 620.50781 25	-362 790
15	740 350 246 768.94531 25	188 790
17	-158 646 481 450.48828 125	-40 455

P_{18}^6 Numerator 1 003 917 915 / Denominator 1 024

k	a_k	b_k
0	6 862 720.12207 03125	7
2	-1 049 996 178.67675 78125	-1 071
4	26 270 492 627.28515 625	26 796
6	-251 697 123 197.05078 125	-256 732
8	1 202 789 740 251.70898 4375	1 226 850
10	-3 217 841 230 265.77148 4375	-3 282 210
12	5 044 275 759 667.67578 125	5 145 180
14	-4 600 747 962 064.16015 625	-4 692 780
16	2 260 712 360 669.45800 78125	2 305 935
18	-462 718 904 230.59082 03125	-471 975

P_{19}^6 Numerator 1 930 611 375 / Denominator 1 024

k	a_k	b_k
1	171 568 003.05175 78125	91
3	-9 779 376 173.95019 53125	-5 187
5	162 646 466 893.06640 625	86 268
7	-1 224 211 230 918.45703 125	-649 324
9	4 973 364 253 034.91210 9375	2 637 882
11	-11 834 515 753 363.03710 9375	-6 277 050
13	16 983 309 232 199.70703 125	9 007 980
15	-14 461 236 962 986.81640 625	-7 670 268
17	6 727 220 992 275.51269 53125	3 568 131
19	-1 316 969 188 963.98925 78125	-698 523

P_{20}^6 Numerator 25 097 947 875 / Denominator 2 048

k	a_k	b_k
0	-12 254 857.36083 98437 5	-1
2	2 352 932 613.28125	192
4	-74 154 141 890.44189 45312 5	-6 051
6	902 545 734 911.13281 25	73 648
8	-5 558 141 536 579.46777 34375	-453 546
10	19 600 516 901 786.13281 25	1 599 408
12	-41 975 214 883 775.02441 40625	-3 425 190
14	55 526 268 507 670.89843 75	4 530 960
16	-44 321 860 755 230.16357 42187 5	-3 616 677
18	19 566 399 378 893.55468 75	1 596 624
20	-3 668 699 883 542.54150 39062 5	-299 367

TABLE 1 (Continued)

P^{*}_{21}

Numerator 15 058 768 725
Denominator 2 048

k	a_k	b_k
1	-330 881 148.74267 57812 5	-45
3	23 382 267 844.48242 1875	3 180
5	-484 608 530 448.52294 92187 5	-65 907
7	4 588 924 475 682.42187 5	624 096
9	-23 812 751 571 911.05957 03125	-3 238 546
11	74 087 906 837 378.02734 375	10 075 992
13	-144 169 990 018 131.22558 59375	-19 607 190
15	176 837 944 656 810.9375	24 050 048
17	-132 806 935 784 240.00244 14062 5	-18 061 809
19	55 764 238 229 846.63085 9375	7 583 964
21	-10 027 779 681 682.94677 73437 5	-1 363 783

P^{*}_{22}

Numerator 15 058 768 725
Denominator 32 768

k	a_k	b_k
0	20 680 071.79641 72363 28125	45
2	-4 859 816 872.15805 05371 09375	-10 575
4	187 974 959 272.16720 58105 46875	409 035
6	-2 825 431 353 242.94204 71191 40625	-6 148 161
8	21 712 098 371 374.36065 67382 8125	47 245 698
10	-97 072 642 121 275.07171 63085 9375	-211 230 838
12	269 944 424 741 823.80218 50585 9375	587 401 206
14	-481 157 426 280 422.30987 54882 8125	-1 047 002 370
16	550 045 116 289 630.29556 27441 40625	1 196 902 529
18	-389 336 938 872 027.88009 64355 46875	-848 505 867
20	156 057 321 296 190.85922 24121 09375	339 581 967
22	-26 949 657 894 522.91946 41113 28125	-58 642 669

P^{*}_{23}

Numerator 25 688 487 825
Denominator 32 768

k	a_k	b_k
1	599 722 082.09609 38535 15625	765
3	-51 376 191 699.56588 74511 71875	-65 535
5	1 295 759 530 576.83334 35058 59375	1 652 859
7	-15 037 311 542 061.18850 70830 78125	-19 181 457
9	96 694 204 160 315.05279 54101 5625	123 342 242
11	-378 984 134 523 762.52899 16992 1875	-483 428 694
13	952 015 225 522 926.20086 66992 1875	1 214 381 910
15	-1 564 914 507 824 100.59967 04101 5625	-1 996 190 626
17	1 674 742 613 823 063.72756 95800 78125	2 136 286 353
19	-1 124 032 995 275 115.30990 60058 59375	-1 433 806 203
21	429 609 252 318 571.24557 49511 71875	548 005 631
23	-71 337 329 720 795.96328 73535 15625	-90 997 245

P^{*}_{24}

Numerator 128 442 439 125
Denominator 65 536

k	a_k	b_k
0	-33 317 893.44978 33251 95312 5	-17
2	9 395 645 952.83889 77050 78125	4 794
4	-36 997 490 487.35809 32617 1875	-222 972
6	7 935 455 954 508.69369 50683 59375	4 048 958
8	-74 244 694 180 374.01771 54541 01562 5	-37 882 341
10	408 874 123 169 543.58673 09570 3125	208 622 436
12	-1 424 480 146 673 873.84033 20312 5	-726 821 536
14	3 261 015 608 983 876.57928 46679 6875	1 663 888 668
16	-4 972 349 457 785 111.48643 49365 23437 5	-2 537 073 387
18	5 001 170 782 054 044.65103 14941 40625	2 551 779 074
20	-3 186 400 727 528 886.36016 84570 3125	-1 625 817 444
22	1 165 176 385 439 667.40036 01074 21875	594 515 334
24	-85 269 694 270 967.23747 25341 79687 5	-95 041 567

P^{*}_{25}

Numerator 209 563 979 625
Denominator 65 536

k	a_k	b_k
1	-1 032 854 696.94328 30810 54687 5	-323
3	105 351 179 088.21487 42675 78125	32 946
5	-3 172 929 629 009.76562 5	-992 256
7	44 208 246 738 566.40243 53027 34375	13 825 046
9	-344 148 217 876 198.85589 05029 29687 5	-107 623 923
11	1 652 860 845 843 184.82208 25195 3125	516 891 732
13	-5 176 841 260 668 821.27380 37109 375	-1 618 930 264
15	10 880 905 267 101 735.28289 79492 1875	3 402 736 524
17	-15 467 757 991 903 282.87696 83837 89062 5	-4 837 162 329
19	14 672 545 167 310 613.01040 64941 40625	4 588 479 002
21	-8 895 890 163 393 293.10607 91015 625	-2 781 971 688
23	3 117 566 462 008 820.07980 34667 96875	974 942 526
25	-80 379 737 856 704.98085 02197 26562 5	-150 226 993

TABLE 1 (Continued)

P_7^7 Numerator 135 135; Denominator 1

k	a_k	b_k
0	135 135.	1
2	-405 405.	-3
4	405 405.	3
6	-135 135.	-1

P_8^7 Numerator 2 027 025; Denominator 1

k	a_k	b_k
1	2 027 025.	1
3	-6 081 075.	-3
5	6 081 075.	3
7	-2 027 025.	-1

P_9^7 Numerator 2 027 025; Denominator 2

k	a_k	b_k
0	-1 013 512.5	-1
2	20 270 250.	20
4	-54 729 675.	-54
6	52 702 650.	52
8	-17 229 712.5	-17

P_{10}^7 Numerator 11 486 475; Denominator 2

k	a_k	b_k
1	-17 229 712.5	-3
3	160 810 650.	28
5	-379 053 675.	-66
7	344 594 250.	60
9	-109 121 512.5	-19

P_{11}^7 Numerator 34 459 425; Denominator 8

k	a_k	b_k
0	4 307 428.125	1
2	-176 60 553.125	-41
4	1 076 857 031.25	250
6	-2 214 018 056.25	-514
8	1 882 346 090.625	437
10	-572 887 940.625	-133

P_{12}^7 Numerator 130 945 815; Denominator 8

k	a_k	b_k
1	81 841 134.375	5
3	-1 391 299 284.375	-85
5	6 318 135 573.75	386
7	-11 425 022 358.75	-698
9	9 051 629 461.875	553
11	-2 635 284 526.875	-161

P_{13}^7 Numerator 218 243 025; Denominator 16

k	a_k	b_k
0	-13 640 189.0625	-1
2	900 252 478.125	66
4	-9 207 127 617.1875	-675
6	33 336 622 068.75	2 444
8	-53 565 022 448.4375	-3 927
10	39 529 267 903.125	2 898
12	-10 980 352 195.3125	-805

P_{14}^7 Numerator 654 729 075; Denominator 16

k	a_k	b_k
1	-286 443 970.3125	-7
3	7 447 543 228.125	182
5	-53 565 022 448.4375	-1 309
7	161 227 034 718.75	3 940
9	-232 469 742 192.1875	-5 681
11	159 999 417 703.125	3 910
13	-42 352 787 039.0625	-1 035

P_{15}^7 Numerator 654 729 075; Denominator 128

k	a_k	b_k
0	35 805 496.28906 25	7
2	-3 401 522 147.46093 75	-665
4	51 166 054 197.07031 25	10 003
6	-281 681 839 306.05468 75	-55 069
8	725 056 184 782.61718 75	141 749
10	-946 467 143 692.38281 25	-185 035
12	608 821 313 686.52343 75	119 025
14	-153 528 853 016.60156 25	-30 015

P_{16}^7 Numerator 5 019 589 575; Denominator 128

k	a_k	b_k
1	823 526 414.64843 75	21
3	-29 921 459 732.22656 25	-763
5	307 175 352 663.86718 75	7 833
7	-1 364 347 975 811.13281 25	-34 791
9	3 065 675 117 387.69531 25	78 175
11	-3 651 163 182 659.17968 75	-93 105
13	2 200 580 226 571.28906 25	56 115
15	-528 821 604 834.96093 75	-13 485

P_{17}^7 Numerator 3 011 753 745; Denominator 256

k	a_k	b_k
0	-82 352 641.46484 375	-7
2	10 541 138 107.5	896
4	-216 422 741 769.60937 5	-18 396
6	1 661 546 894 194.6875	141 232
8	-6 169 977 545 176.75781 25	-524 450
10	12 293 602 317 871.875	1 044 960
12	-13 449 127 524 254.29687 5	-1 143 180
14	7 615 031 109 623.4375	647 280
16	-1 745 111 295 955.37109 375	-148 335

P_{18}^7 Numerator 75 293 843 625; Denominator 256

k	a_k	b_k
1	-2 058 816 036.62109 375	-7
3	98 823 169 757.8125	336
5	-1 358 818 584 169.92187 5	-4 620
7	8 263 499 337 843.75	28 096
9	-26 320 492 445 317.38281 25	-89 490
11	47 082 181 591 757.8125	160 080
13	-47 593 944 435 146.48437 5	-161 820
15	25 383 437 032 078.125	86 304
17	-5 552 626 850 767.08984 375	-18 879

P_{19}^7 Numerator 25 097 947 875; Denominator 1 024

k	a_k	b_k
0	171 568 003.05175 78125	7
2	-28 308 720 503.54003 90625	-1 155
4	755 585 485 439.94140 625	30 828
6	-7 651 246 664 096.19140 625	-312 172
8	38 333 242 844 136.47460 9375	1 564 002
10	-106 766 523 201 961.66992 1875	-4 356 090
12	173 189 075 583 449.70703 125	7 066 140
14	-162 612 643 486 750.48828 125	-6 634 620
16	81 901 246 048 814.57519 53125	3 341 583
18	-17 120 599 456 531.86035 15625	-698 523

P_{20}^7 Numerator 225 881 530 875; Denominator 1 024

k	a_k	b_k
1	4 632 336 082.39746 09375	21
3	-282 572 501 026.24511 71875	-1 281
5	4 984 393 624 659.66796 875	22 596
7	-39 480 738 667 976.07421 875	-178 980
9	167 640 713 423 044.18945 3125	759 974
11	-414 463 932 789 400.63476 5625	-1 878 910
13	614 755 115 620 642.08984 375	2 786 900
15	-538 604 804 524 407.71484 375	-2 441 684
17	256 808 991 847 977.90527 34375	1 164 205
19	-51 361 798 369 595.58105 46875	-232 841

P_{21}^7 Numerator 225 881 530 875; Denominator 2 048

k	a_k	b_k
0	-330 881 148.74267 57812 5	-3
2	68 161 516 640.99121 09375	618
4	-2 284 734 332 068.17626 95312 5	-20 715
6	29 353 128 467 260.25390 625	266 136
8	-189 550 560 155 621.70410 15625	-1 718 598
10	696 854 669 771 269.77539 0625	6 318 172
12	-1 547 794 734 651 326.29394 53125	-14 033 390
14	2 113 964 365 327 756.34765 625	19 166 680
16	-1 735 295 044 915 622.13134 76562 5	-15 733 399
18	785 101 775 078 103.88183 59375	7 118 282
20	-150 416 695 225 244.20166 01562 5	-1 363 783

TABLE 1 (Continued)

P^7_{22} — Numerator 436 704 293 025; Denominator 2 048

k	a_k	b_k
1	-9 595 553 313.53759 76562 5	-45
3	722 865 016 286.49902 34375	3 390
5	-15 853 773 184 626.81884 76562 5	-74 349
7	157 843 013 786 368.06640 625	740 232
9	-856 307 604 169 131.37207 03125	-4 015 802
11	2 771 316 061 217 854.54101 5625	12 996 564
13	-5 584 554 455 159 000.61035 15625	-26 189 730
15	7 065 426 815 718 462.59765 625	33 134 536
17	-5 453 889 246 874 342.19970 70312 5	-25 576 953
19	2 346 500 445 513 809.54589 84375	11 004 318
21	-431 194 526 312 366.71142 57812 5	-2 022 161

P^7_{23} — Numerator 6 550 564 395 375; Denominator 32 768

k	a_k	b_k
0	599 722 082.09609 98535 15625	3
2	-150 530 242 606.12106 32324 21875	-753
4	6 174 138 835 179.34799 19433 59375	30 885
6	-97 791 282 428 672.13821 41113 28125	-489 183
8	787 493 866 556 224.52545 16601 5625	3 939 294
10	-3 671 414 225 686 108.45184 32617 1875	-18 365 578
12	10 599 704 378 730 744.80438 23242 1875	53 023 082
14	-19 538 119 817 291 247.59674 07226 5625	-97 735 870
16	23 016 735 188 117 741.16897 58300 78125	115 137 007
18	-16 762 060 474 163 150.72250 36621 09375	-83 849 141
20	6 872 162 763 103 344.4[illegible]334 83886 71875	34 376 737
22	-1 212 734 605 253 531.[illegible]588 50097 65625	-6 066 483

P^7_{24} — Numerator 11 945 146 838 625; Denominator 32 768

k	a_k	b_k
1	18 591 384 544.97909 54589 84375	51
3	-1 691 815 993 593.09768 67675 78125	-4 641
5	45 046 924 752 484.34829 71191 40625	123 573
7	-548 910 628 690 507.79342 65136 71875	-1 505 775
9	3 688 319 991 365 676.10931 39648 4375	10 117 822
11	-15 040 938 261 398 984.32159 42382 8125	-41 260 394
13	39 160 161 144 418 530.83038 33007 8125	107 424 394
15	-66 485 555 052 014 265.58685 30273 4375	-182 383 582
17	73 259 013 602 809 652.99606 32324 21875	200 964 575
19	-50 483 050 332 416 610.01968 38378 90625	-138 485 413
21	19 760 440 332 660 481.83059 69238 28125	54 206 961
23	-3 352 854 496 877 410.27450 56152 34375	-9 197 571

P^7_{25} — Numerator 3 981 715 612 875; Denominator 65 536

k	a_k	b_k
0	-1 032 854 696.94328 30810 54687 5	-17
2	309 856 409 082.98492 43164 0625	5 100
4	-15 238 738 198 701.19867 78808 59375	-250 818
6	291 046 059 342 253.85284 42382 8125	4 790 396
8	-2 850 496 148 282 102.34260 55908 20312 5	-46 916 991
10	16 363 417 809 621 527.29797 36328 125	269 329 368
12	-59 199 822 808 289 073.37188 72070 3125	-974 383 900
14	140 251 645 022 918 704.78820 80078 125	2 308 435 032
16	-220 628 388 243 352 721.66633 60595 70312 5	-3 631 374 879
18	228 295 307 846 485 037.17803 95507 8125	3 757 566 524
20	-149 261 472 885 812 087.18490 60058 59375	-2 456 729 922
22	55 880 908 281 290 171.24176 02539 0625	919 757 100
24	-9 127 215 019 277 394.63615 41748 04687 5	-150 226 993

TABLE 1 (Continued)

P^8_8 Numerator 2 027 025; Denominator 1

k	a_k	b_k
0	2 027 025.	1
2	−8 108 100.	−4
4	12 162 150.	6
6	−8 108 100.	−4
8	2 027 025.	1

P^8_9 Numerator 34 459 425; Denominator 1

k	a_k	b_k
1	34 459 425.	1
3	−137 837 700.	−4
5	206 756 550.	6
7	−137 837 700.	−4
9	34 459 425.	1

P^8_{10} Numerator 34 459 425; Denominator 2

k	a_k	b_k
0	−17 229 712.5	−1
2	396 283 387.5	23
4	−1 412 836 425.	−82
6	2 033 106 075.	118
8	−1 326 687 862.5	−77
10	327 364 537.5	19

P^8_{11} Numerator 654 729 075; Denominator 2

k	a_k	b_k
1	−327 364 537.5	−1
3	3 601 009 912.5	11
5	−11 130 394 275.	−34
7	15 058 768 725.	46
9	−9 493 571 587.5	−29
11	2 291 551 762.5	7

P^8_{12} Numerator 654 729 075; Denominator 8

k	a_k	b_k
0	81 841 134.375	1
2	−3 764 692 181.25	−46
4	27 416 780 015.625	335
6	−73 657 020 937.5	−900
8	92 889 687 515.625	1 135
10	−56 143 018 181.25	−686
12	13 176 422 634.375	161

P^8_{13} Numerator 4 583 103 525; Denominator 8

k	a_k	b_k
1	1 718 663 821.875	3
3	−33 227 500 556.25	−58
5	181 605 477 178.125	317
7	−428 520 179 587.5	−748
9	502 422 723 928.125	877
11	−289 881 297 956.25	−506
13	65 882 113 171.875	115

P^8_{14} Numerator 4 583 103 525; Denominator 16

k	a_k	b_k
0	−286 443 970.3125	−1
2	20 910 409 832.8125	73
4	−245 482 482 557.8125	−857
6	1 075 024 220 582.8125	3 753
8	−2 253 454 714 448.4375	−7 867
10	2 457 402 821 310.9375	8 579
12	−1 350 583 320 023.4375	−4 715
14	296 469 509 273.4375	1 035

P^8_{15} Numerator 15 058 768 725; Denominator 16

k	a_k	b_k
1	−6 588 211 317.1875	−7
3	191 058 128 198.4375	203
5	−1 587 758 927 442.1875	−1 687
7	5 800 449 478 260.9375	6 163
9	−10 914 783 806 489.0625	−11 597
11	11 091 724 339 007.8125	11 785
13	−5 802 331 824 351.5625	−6 165
15	1 228 230 824 132.8125	1 305

P^8_{16} Numerator 15 058 768 725; Denominator 128

k	a_k	b_k
0	823 526 414.64843 75	7
2	−85 646 747 123.4375	−728
4	1 446 112 384 122.65625	12 297
6	−9 243 260 478 014.0625	−78 566
8	28 955 424 032 300.39062 5	246 122
10	−49 359 820 361 414.0625	−419 560
12	46 863 358 858 722.65625	398 340
14	−23 336 385 658 523.4375	−198 360
16	4 759 394 443 514.64843 75	40 455

P^8_{17} Numerator 75 293 843 625; Denominator 128

k	a_k	b_k
1	20 588 160 366.21093 75	35
3	−823 526 414 648.4375	−1 400
5	9 536 435 881 628.90625	16 212
7	−49 359 820 361 414.0625	−83 912
9	135 275 978 269 072.26562 5	229 970
11	−210 563 939 562 539.0625	−357 960
13	187 305 200 680 [illegible] 90625	318 420
15	−88 842 029 61[illegible] .375	−151 032
17	17 451 112 95[illegible] 53.71093 75	29 667

P^8_{18} Numerator 75 293 843 625; Denominator 256

k	a_k	b_k
0	−2 058 816 036.62109 375	−7
2	286 175 429 090.33203 125	973
4	−6 497 623 411 576.17187 5	−22 092
6	56 485 676 780 736.32812 5	192 052
8	−245 147 931 345 700.19531 25	−833 506
10	596 865 474 845 288.08593 75	2 029 350
12	−854 132 185 615 693.35937 5	−2 904 060
14	713 909 166 527 197.26562 5	2 427 300
16	−322 845 589 751 743.65234 375	−1 097 679
18	61 078 895 358 437.98828 125	207 669

P^8_{19} Numerator 225 881 530 875; Denominator 256

k	a_k	b_k
1	−55 588 032 988.76953 125	−63
3	2 909 107 059 745.60546 875	3 297
5	−44 396 309 013 697.26562 5	−50 316
7	306 665 942 753 091.79687 5	347 556
9	−1 144 331 717 707 889.64843 75	−1 296 914
11	2 505 334 999 809 243.16406 25	2 839 390
13	−3 315 711 462 315 205.07812 5	−3 757 820
15	2 611 321 084 675 037.10937 5	2 959 508
17	−1 127 183 250 705 719.23828 125	−1 277 479
19	205 447 193 478 382.32421 875	232 841

TABLE 1 (Continued)

P^{*}_{20} — Numerator 1 581 170 716 125; Denominator 1 024

k	a_k	b_k
0	4 632 336 082.39746 09375	3
2	-824 555 822 666.74804 6875	-534
4	24 074 250 620 219.60449 21875	15 591
6	-271 380 777 051 172.85156 25	-175 752
8	1 548 247 159 475 373.77929 6875	1 002 678
10	-5 062 025 400 952 539.55078 125	-3 278 276
12	10 064 136 167 015 350.34179 6875	6 517 750
14	-12 382 357 877 210 610.35156 25	-8 019 080
16	9 213 196 102 135 293.82324 21875	5 966 663
18	-3 800 773 079 350 072.99804 6875	-2 461 462
20	667 703 378 804 742.55371 09375	432 419

P^{*}_{21} — Numerator 45 853 950 767 625; Denominator 1 024

k	a_k	b_k
1	34 337 746 389.52636 71875	3
3	[illegible] 291 261 708.74023 4375	-198
5	171 349 302 139 425.17089 84375	3 831
7	-1 516 404 481 244 973.63281 25	-33 864
9	7 347 647 818 023 941.16210 9375	164 086
11	-21 360 955 454 500 994.62890 625	-477 028
13	38 882 269 522 496 546.63085 9375	868 310
15	-44 676 435 641 272 004.88281 25	-997 704
17	31 484 782 400 562 091.18652 34375	703 111
19	-12 429 555 205 442 130.61523 4375	-277 574
21	2 105 833 733 153 418.82324 21875	47 027

P^{*}_{22} — Numerator 6 550 564 395 375; Denominator 2 048

k	a_k	b_k
0	-9 595 553 313.53759 76562 5	-3
2	2 120 617 282 291.80908 20312 5	663
4	-77 100 270 874 274.59716 79687 5	-24 105
6	1 089 047 323 319 949.64599 60937 5	340 485
8	-7 864 611 451 308 550.41503 90625	-2 458 830
10	33 053 399 485 903 794.06738 28125	10 333 974
12	-86 455 788 223 156 280.63964 84375	-27 029 954
14	145 073 283 421 889 943.23730 46875	45 356 410
16	-156 304 958 538 329 980.77392 57812 5	-48 867 935
18	104 576 290 180 380 145.56884 76562 5	32 695 235
20	-39 559 590 844 239 225.03662 10937 5	-12 368 101
22	6 467 917 894 685 500.67138 67187 5	2 022 161

P^{*}_{23} — Numerator 203 067 496 256 625; Denominator 2 048

k	a_k	b_k
1	-297 462 152 719.66552 73437 5	-3
3	24 094 434 370 292.90771 48437 5	243
5	-574 399 416 901 674.13330 07812 5	-5 793
7	6 299 950 932 449 796.20361 32812 5	63 537
9	-38 289 129 989 973 533.56933 59375	-386 158
11	141 882 109 447 513 371.45996 09375	1 430 926
13	-337 131 903 714 461 935.18066 40625	-3 400 082
15	524 572 721 548 213 839.47753 90625	5 290 482
17	-531 884 440 416 114 124.69482 42187 5	-5 364 223
19	338 587 980 952 024 697.93701 17187 5	3 414 767
21	-122 890 439 999 024 512.75634 76562 5	-1 239 389
23	19 403 753 684 056 502.01416 01562 5	195 693

P^{*}_{24} — Numerator 203 067 496 256 625; Denominator 32 768

k	a_k	b_k
0	18 591 384 544.97909 54589 84375	3
2	-4 982 491 058 054.39758 30078 125	-804
4	220 159 175 781 642.44844 52929 6875	35 526
6	-3 797 327 476 081 070.20568 84765 625	-612 756
8	33 743 790 550 981 592.77725 21972 65625	5 445 069
10	-176 515 280 849 485 855.86547 85156 25	-28 483 400
12	584 286 786 184 435 822.40295 41015 625	94 283 476
14	-1 271 404 453 791 143 699.61547 85156 25	-205 160 264
16	1 843 773 226 715 892 491.21475 21972 65625	297 520 589
18	-1 765 027 105 946 821 773.33068 84765 625	-284 813 716
20	1 071 248 901 307 286 048.69843 52929 6875	172 862 150
22	-373 522 258 418 087 663.77258 30078 125	-60 273 444
24	56 998 526 446 915 974.66659 54589 84375	9 197 571

P^{*}_{25} — Numerator 11 945 146 838 625; Denominator 32 768

k	a_k	b_k
1	613 515 689 984.31015 01464 84375	1 683
3	-59 715 527 158 472.85461 42578 125	-163 812
5	1 715 798 879 656 120.71990 96679 6875	4 705 790
7	-22 803 969 186 256 818.74084 47265 625	-62 555 988
9	169 335 170 392 779 477.66494 75097 65625	464 521 277
11	-775 851 544 937 954 989.65454 10156 25	-2 128 320 712
13	2 318 721 967 170 596 307.26623 53515 625	6 360 732 308
15	-4 652 067 372 076 993 184.96704 10156 25	-12 761 579 720
17	6 315 599 423 670 257 885.86807 25097 65625	17 324 991 037
19	-5 724 773 151 874 062 189.83459 47265 625	-15 704 232 788
21	3 319 040 602 589 752 987.90740 96679 6875	9 104 817 518
23	-1 113 147 692 963 300 211.13586 42578 125	-3 053 593 572
25	164 289 870 346 993 103.45077 51464 84375	450 680 979

TABLE 1 (Continued)

P_9^* Numerator 34 459 25
Denominator 1

k	a_k	b_k
0	34 459 425.	1
2	-137 837 700.	-4
4	206 756 550.	6
6	-137 837 700.	-4
8	34 459 425.	1

P_{10}^* Numerator 654 729 075
Denominator 1

k	a_k	b_k
1	654 729 075.	1
3	-2 618 916 300.	-4
5	3 928 374 450.	6
7	-2 618 916 300.	-4
9	654 729 075.	1

P_{11}^* Numerator 654 729 075
Denominator 2

k	a_k	b_k
0	-327 364 537.5	-1
2	8 184 113 437.5	25
4	-29 462 808 375.	-90
6	42 557 389 875.	130
8	-27 825 985 687.5	-85
10	6 874 655 287.5	21

P_{12}^* Numerator 4 583 103 525
Denominator 2

k	a_k	b_k
1	-6 874 655 287.5	-3
3	80 204 311 687.5	35
5	-252 070 693 875.	-110
7	343 732 764 375.	150
9	-217 697 417 437.5	-95
11	52 705 690 537.5	23

P_{13}^* Numerator 4 583 103 525
Denominator 8

k	a_k	b_k
0	1 718 663 821.875	3
2	-85 933 191 093.75	-150
4	695 956 692 015.625	1 145
6	-1 748 868 133 562.5	-3 140
8	2 294 416 202 203.125	4 005
10	-1 396 700 799 243.75	-2 438
12	329 410 565 859.375	575

P_{14}^* Numerator 105 411 381 075
Denominator 8

k	a_k	b_k
1	39 529 267 903.125	3
3	-816 938 203 331.25	-62
5	4 651 277 189 934.375	353
7	-11 226 312 084 487.5	-852
9	13 347 716 128 621.875	1 013
11	-7 774 089 354 281.25	-590
13	1 778 817 055 640.625	135

P_{15}^* Numerator 105 411 381 075
Denominator 16

k	a_k	b_k
0	-6 588 211 317.1875	-1
2	520 468 694 057.8125	79
4	-6 463 035 302 160.9375	-981
6	29 376 834 263 339.0625	4 459
8	-63 055 770 516 801.5625	-9 571
10	69 867 981 018 773.4375	10 605
12	-38 837 505 714 820.3125	-5 895
14	8 597 615 768 929.6875	1 305

P_{16}^* Numerator 75 293 843 625
Denominator 16

k	a_k	b_k
1	-164 705 282 929.6875	-35
3	5 105 863 770 820.3125	1 085
5	-44 569 249 560 773.4375	-9 471
7	168 587 621 741 601.5625	35 825
9	-325 010 581 872 539.0625	-69 065
11	336 069 365 154 960.9375	71 415
13	-178 093 469 499 257.8125	-37 845
15	38 075 155 548 117.1875	8 091

P_{17}^* Numerator 75 293 843 625
Denominator 128

k	a_k	b_k
0	20 588 160 366.21093 75	35
2	-2 305 873 961 015.625	-3 920
4	41 258 673 373 886.71875	70 140
6	-275 650 761 511 125.	-468 608
8	892 473 222 549 111.32812 5	1 517 210
10	-1 559 006 090 907 890.625	-2 650 320
12	1 507 653 336 623 027 34375	2 563 020
14	-761 503 110 962 343.75	-1 294 560
16	157 060 016 635 983.39843 75	267 003

P_{18}^* Numerator 225 881 530 875
Denominator 128

k	a_k	b_k
1	555 880 329 887.69531 25	315
3	-23 717 560 741 875.	-13 440
5	289 206 006 296 238.28125	163 884
7	-1 559 006 090 907 890.625	-883 440
9	4 409 648 657 544 990.23437 5	2 498 810
11	-7 033 668 519 533 906.25	-3 985 760
13	6 377 588 554 309 628.90625	3 613 980
15	-3 071 395 880 881 453.125	-1 740 464
17	610 788 953 584 379.88281 25	346 115

P_{19}^* Numerator 1 581 170 716 125
Denominator 256

k	a_k	b_k
0	-55 588 032 988.76953 125	-9
2	8 282 616 915 326.66015 625	1 341
4	-199 153 392 854 431.64062 5	-32 244
6	1 814 319 279 376 119.14062 5	293 748
8	-8 178 000 237 241 795.89843 75	-1 324 062
10	20 525 016 478 367 768.55468 75	3 323 110
12	-30 095 237 531 157 626.95312 5	-4 872 580
14	25 653 136 050 543 955.07812 5	4 153 380
16	-11 788 226 804 178 531.73828 125	-1 908 577
18	2 259 919 128 262 205.56640 625	365 893

TABLE 1 (Continued)

P°_{20}

Numerator 45 853 950 767 625
Denominator 256

k	a_k	b_k
1	-1 612 052 956 674.31640 625	-9
3	89 737 614 588 203.61328 125	501
5	-1 442 250 045 237 955.07812 5	-8 052
7	10 400 965 676 462 689.45312 5	58 068
9	-40 219 288 333 062 706.05466 75	-224 542
11	90 674 396 473 026 577.14843 75	506 230
13	-122 935 158 475 983 369.14062 5	-686 340
15	98 770 126 421 444 994.14062 5	551 428
17	-43 349 357 823 938 670.41015 625	-242 017
19	8 012 440 545 656 910.64453 125	44 733

P°_{21}

Numerator 45 853 950 767 625
Denominator 1 024

k	a_k	b_k
0	134 337 746 389.52636 71875	3
2	-25 524 171 814 010.00976 5625	-570
4	787 890 882 574 572.14355 45875	17 595
6	-9 312 292 579 72[illegible] 967.77343 75	-207 960
8	55 300 133 301 248 529.05273 4375	1 234 950
10	-187 018 024 960 686 353.02734 375	-4 176 444
12	382 534 345 316 471 737.06054 6875	8 542 670
14	-482 023 536 915 091 069.33593 75	-10 764 440
16	365 952 813 383 368 515.01464 84375	8 172 375
18	-153 571 777 125 090 787.35351 5625	-3 429 530
20	27 375 838 530 994 444.70214 84375	611 351

P°_{22}

Numerator 1 421 472 473 796 375
Denominator 1 024

k	a_k	b_k
1	4 164 470 138 075.31738 28125	3
3	-291 512 909 665 272.21679 6875	-210
5	5 934 369 946 757 327.27050 78125	4 275
7	-54 804 427 017 071 176.75781 25	-39 480
9	275 729 567 841 966 763.91601 5625	198 630
11	-827 846 689 807 716 191.89453 125	-596 364
13	1 549 002 430 991 368 135.98632 8125	1 115 870
15	-1 822 316 606 153 251 215.82031 25	-1 312 760
17	1 310 496 285 400 231 250.61035 15625	944 055
19	-526 458 433 288 354 705.81054 6875	-379 250
21	90 550 850 525 597 009.39941 40625	65 231

P°_{23}

Numerator 203 067 496 256 625
Denominator 2 048

k	a_k	b_k
0	-297 462 152 719.66552 73437 5	-3
2	69 903 605 889 121.39892 57812 5	705
4	-2 681 621 306 767 784.72900 39062 5	-27 045
6	39 694 836 969 675 766.29638 67187 5	400 335
8	-298 607 382 007 636 239.62402 34375	-3 011 550
10	1 300 384 951 904 984 380.00488 28125	13 114 794
12	-3 507 976 124 725 560 891.72363 28125	-35 379 050
14	6 046 274 217 069 956 376.34277 34375	60 978 590
16	-6 667 770 320 841 480 619.81201 17187 5	-67 246 575
18	4 552 361 280 992 015 763.24462 89062 5	45 912 005
20	-1 752 805 749 459 770 681.94580 07812 5	-17 677 601
22	291 056 305 260 847 530.21240 23437 5	2 935 395

P°_{24}

Numerator 203 067 496 256 625
Denominator 2 048

k	a_k	b_k
1	-9 816 251 039 746.96245 23437 5	-99
3	840 925 505 736 494.44580 07812 5	8 481
5	-21 062 402 647 621 356.99462 89062 5	-212 421
7	241 293 266 808 069 244.81201 17187 5	2 433 519
9	-1 523 859 541 686 789 313.84277 34375	-15 368 606
11	5 640 612 454 225 412 266.72363 28125	58 904 426
13	-14 296 197 043 588 342 817.53466 28125	-144 181 674
15	22 832 601 306 612 799 239.62402 34375	230 274 014
17	-23 688 072 414 157 132 610.04638 67187 5	-238 901 711
19	15 367 176 671 456 806 097.22900 39062 5	155 184 549
21	-5 685 299 829 428 555 090.14892 57812 5	-57 338 049
23	911 976 423 150 655 594.66552 73437 5	9 197 571

P°_{25}

Numerator 203 067 496 256 625
Denominator 32 768

k	a_k	b_k
0	613 515 689 984.31015 01464 84375	99
2	-174 238 455 955 544.08264 16015 625	-28 116
4	8 106 178 306 532 695.24383 54492 1875	1 308 054
6	-146 374 209 358 296 673.78234 86328 125	-23 619 684
8	1 354 838 354 990 461 806.46133 42285 15625	218 623 581
10	-7 348 863 809 719 822 557.40356 44531 25	-1 185 849 896
12	25 122 076 398 311 794 406.02111 81640 625	4 053 825 524
14	-56 252 544 018 696 084 904.81567 38281 25	-9 077 195 496
16	83 677 117 788 237 251 449.71084 59472 65625	13 502 563 661
18	-81 933 966 910 402 251 129.95910 64453 125	-13 221 280 004
20	50 738 390 414 597 245 704.27703 85742 1875	8 187 403 734
22	-18 011 534 357 225 447 994.64416 50390 625	-2 906 432 436
24	2 792 927 795 898 882 758.66317 74902 34375	450 680 979

TABLE 1 (Continued)

P_{10}^{10} Numerator 654 729 075 / Denominator 1

k	a_k	b_k
0	654 729 075.	1
2	-3 273 645 375.	-5
4	6 547 290 750.	10
6	-6 547 290 750.	-10
8	3 273 645 375.	5
10	-654 729 075.	-1

P_{11}^{10} Numerator 13 749 310 575 / Denominator 1

k	a_k	b_k
1	13 749 310 575.	1
3	-68 746 552 875.	-5
5	137 493 105 750.	10
7	-137 493 105 750.	-10
9	68 746 552 875.	5
11	-13 749 310 575.	-1

P_{12}^{10} Numerator 13 749 310 575 / Denominator 2

k	a_k	b_k
0	-6 874 655 287.5	-1
2	192 490 348 050.	28
4	-859 331 910 937.5	-125
6	1 649 917 269 000.	240
8	-1 615 543 992 562.5	-235
10	797 460 013 350.	116
12	-158 117 071 612.5	-23

P_{13}^{10} Numerator 105 411 381 075 / Denominator 2

k	a_k	b_k
1	-158 117 071 612.5	-3
3	2 108 227 621 500.	40
5	-8 169 382 033 312.5	-155
7	14 757 593 350 500.	280
9	-13 967 007 992 437.5	-265
11	6 746 328 388 800.	128
13	-1 317 642 263 437.5	-25

P_{14}^{10} Numerator 316 234 143 225 / Denominator 8

k	a_k	b_k
0	39 529 267 903.125	1
2	-2 174 109 734 671.875	-55
4	19 171 694 933 015.625	485
6	-96 630 353 021 609.375	-1 635
8	108 903 133 073 109.375	2 755
10	-98 862 699 025 715.625	-2 501
12	46 446 889 786 171.875	1 175
14	-8 894 065 278 203.125	-225

P_{15}^{10} Numerator 1 581 170 716 125 / Denominator 8

k	a_k	b_k
1	988 231 697 578.125	5
3	-22 729 329 044 296.875	-115
5	150 408 864 371 390.625	761
7	-445 692 495 607 734.375	-2 255
9	698 679 810 187 734.375	3 535
11	-605 786 030 615 390.625	-3 065
13	275 716 643 624 296.875	1 395
15	-51 585 694 613 578.125	-261

P_{16}^{10} Numerator 527 056 905 375 / Denominator 16

k	a_k	b_k
0	-164 705 282 929.6875	-5
2	14 164 654 331 953.125	430
4	-197 316 928 949 765.625	-5 990
6	1 046 405 603 508 890.625	31 766
8	-2 750 507 615 111 250.	-83 680
10	4 021 773 598 577 109.375	122 090
12	-3 323 423 198 955 234.375	-100 690
14	1 461 594 680 718 046.875	44 370
16	-266 526 088 836 820.3125	-8 091

P_{17}^{10} Numerator 2 032 933 777 875 / Denominator 16

k	a_k	b_k
1	-4 467 042 634 101 5625	-35
3	151 199 449 729 453.125	1 190
5	-1 483 869 875 571 203.125	-11 714
7	6 588 484 257 370 440.625	51 654
9	-15 591 840 904 078 906.25	-122 700
11	21 209 852 221 292 109.375	166 930
13	-16 661 656 899 364 921.875	-131 370
15	7 061 478 931 949 796.875	55 738
17	-1 256 480 133 087 867.1875	-9 889

P_{18}^{10} Numerator 14 230 536 445 125 / Denominator 128

k	a_k	b_k
0	555 880 329 887.69531 25	5
2	-67 261 519 916 411.13281 25	-905
4	1 327 442 227 771 816.40625	11 940
6	-10 045 424 617 466 519.53125	-90 350
8	38 127 831 826 997 021.48437 5	342 950
10	-81 760 002 372 417 958.98437 5	-735 590
12	104 004 656 764 624 894.53125	935 540
14	-77 956 860 984 764 941.40625	-701 220
16	31 883 163 377 104 629.88281 25	266 761
18	-5 497 100 582 259 418.94531 25	-49 445

P_{19}^{10} Numerator 45 853 950 767 625 / Denominator 128

k	a_k	b_k
1	16 120 529 566 743.16406 25	45
3	-746 917 869 925 766.60156 25	-2 085
5	13 089 302 104 838 988.28125	28 164
7	-61 795 363 339 182 128.906.5	-172 500
9	205 250 164 783 677 685.54687 5	572 950
11	-402 192 883 330 627 060.54687 5	-1 122 710
13	479 524 854 832 245 878.90625	1 338 580
15	-342 530 445 170 120 238.28125	-956 164
17	134 984 358 742 147 954.10156 25	376 805
19	-22 599 191 282 622 055.66406 25	-63 085

TABLE 1 (Continued)

P^{10}_{20} — Numerator 137 561 852 302 875; Denominator 256

k	a_k	b_k
0	-1 612 052 956 674.31640 625	-3
2	257 928 473 067 890.625	480
4	-6 762 562 153 248 757.32421 875	-12 585
6	68 480 009 599 524 960.9375	127 440
8	-351 572 629 321 101 665.03906 25	-654 270
10	1 037 637 649 536 355 054.8875	1 931 024
12	-1 870 180 249 606 863 530.27343 75	-3 480 370
14	2 096 227 688 701 591 757.8125	3 901 040
16	-1 428 329 967 957 072 355.95703 125	-2 658 095
18	542 380 590 782 929 335.9375	1 009 360
20	-88 136 846 002 226 017.08984 375	-164 021

P^{10}_{21} — Numerator 4 264 417 421 389 125; Denominator 256

k	a_k	b_k
1	-49 973 641 656 903.80859 375	-3
3	2 998 418 499 414 228.51562 5	180
5	-52 722 191 948 033 518.06640 625	-3 165
7	423 776 481 250 544 296.875	25 440
9	-1 870 180 249 606 863 530.27343 75	-112 270
11	4 964 448 193 719 033 550.78125	298 024
13	-8 278 466 898 077 161 918.94531 25	-496 970
15	8 747 386 235 624 442 656.25	525 120
17	-5 691 914 495 318 582 292.48046 875	-341 695
19	2 083 234 541 870 796 767.57812 5	125 060
21	-328 510 062 371 933 336.42578 125	-19 721

P^{10}_{22} — Numerator 1 421 472 473 796 375; Denominator 1 024

k	a_k	b_k
0	4 164 470 138 075.31738 28125	3
2	-845 387 438 029 289.42871 09375	-609
4	28 214 285 185 460 275.26855 46875	20 325
6	-365 827 879 279 226 255.49316 40625	-263 535
8	2 426 761 683 560 629 698.48632 8125	1 748 190
10	-9 382 043 155 726 844 874.75585 9375	-6 758 634
12	22 620 571 672 310 934 343.50585 9375	16 295 402
14	-35 079 761 247 255 608 917.23632 8125	-25 270 750
16	35 034 653 094 876 689 771.11816 40625	25 238 255
18	-21 797 176 801 080 820 665.89355 46875	-15 702 245
20	7 692 610 627 209 438 961.30371 09375	5 541 601
22	-1 177 161 056 832 761 122.19238 28125	-848 003

P^{10}_{23} — Numerator 4 264 417 421 389 125; Denominator 1 024

k	a_k	b_k
1	137 427 514 556 485.47363 28125	33
3	-10 307 063 591 736 410.52246 09375	-2 475
5	227 442 536 590 983 458.86230 46875	54 615
7	-2 309 469 382 121 738 384.39941 40625	-554 565
9	13 003 849 519 049 843 800.04882 8125	3 122 570
11	-44 696 483 400 516 699 460.69335 9375	-10 732 814
13	98 679 743 537 881 632 835.69335 9375	23 695 630
15	-142 961 970 435 883 428 175.04882 8125	-34 328 970
17	135 284 665 624 588 128 656.89941 40625	32 485 445
19	-80 579 727 799 115 571 271.36230 46875	-19 349 335
21	27 436 907 709 255 893 848.02246 09375	6 588 331
23	-4 074 788 273 651 865 422.97363 28125	-978 465

P^{10}_{24} — Numerator 609 202 488 769 875; Denominator 2 048

k	a_k	b_k
0	-9 816 251 039 748.96240 23437 5	-33
2	2 454 062 759 937 240.60058 59375	8 250
4	-101 107 385 709 414 312.74414 0625	-339 900
6	1 625 865 659 713 620 642.70019 53125	5 465 790
8	-13 473 442 608 373 034 579.77294 92187 5	-45 294 645
10	65 770 596 538 166 324 247.80273 4375	221 105 764
12	-203 372 398 929 324 693 427.73437 5	-683 691 680
14	413 970 004 817 133 702 681.88476 5625	1 391 672 860
16	-562 525 440 186 960 849 048.15673 82812 5	-1 891 082 395
18	505 549 008 485 093 509 337.76855 46875	1 699 540 610
20	-288 650 239 804 024 523 962.64648 4375	-970 376 356
22	94 884 355 515 036 294 849.24316 40625	318 979 590
24	-13 679 646 347 259 833 919.98291 01562 5	-45 987 855

P^{10}_{25} — Numerator 1 421 472 473 796 375; Denominator 2 048

k	a_k	b_k
1	-343 568 786 391 213.68408 20312 5	-495
3	31 379 282 490 397 516.47949 21875	45 210
5	-845 820 542 923 649 261.71875	-1 218 624
7	10 545 958 421 207 101 104.12597 65625	15 194 190
9	-73 488 638 097 198 225 574.03564 45312 5	-105 879 455
11	316 162 644 399 181 177 987.06054 6875	455 514 340
13	-888 023 921 854 992 366 291.50390 625	-1 279 428 920
15	1 676 349 148 723 972 532 624.26757 8125	2 415 215 996
17	-2 144 228 346 693 138 531 936.95068 35937 5	-3 089 317 405
19	1 834 107 477 395 967 425 385.13183 59375	2 642 507 810
21	-1 005 114 440 834 126 804 333.49609 375	-1 448 128 200
23	319 191 748 102 729 458 132.93457 03125	459 878 550
25	-44 686 844 734 382 124 138.61083 98437 5	-64 382 997

TABLE 1 (Continued)

P^{11}_{11} Numerator 13 749 310 575
Denominator 1

k	a_k	b_k
0	13 749 310 575.	1
2	-68 746 552 875.	-5
4	137 493 105 750.	10
6	-137 493 105 750.	-10
8	68 746 552 875.	5
10	-13 749 310 575.	-1

P^{11}_{12} Numerator 316 234 143 225
Denominator 1

k	a_k	b_k
1	316 234 143 225.	1
3	-1 581 170 716 125.	-5
5	3 162 341 432 250.	10
7	-3 162 341 432 250.	-10
9	1 581 170 716 125.	5
11	-316 234 143 225.	-1

P^{11}_{13} Numerator 316 234 143 225
Denominator 2

k	a_k	b_k
0	-158 117 071 612.5	-1
2	4 743 512 148 375.	30
4	-21 345 804 667 687.5	-135
6	41 110 438 619 250.	260
8	-40 319 853 261 187.5	-255
10	19 922 751 023 175.	126
12	-3 952 926 790 312.5	-25

P^{11}_{14} Numerator 7 905 853 580 625
Denominator 2

k	a_k	b_k
1	-3 952 926 790 312.5	-1
3	55 340 975 064 375.	14
5	-217 410 973 467 187.5	-55
7	395 292 679 031 250.	100
9	-375 528 045 079 687.5	-95
11	181 834 632 354 375.	46
13	-35 576 341 112 812.5	-9

P^{11}_{15} Numerator 7 905 853 580 625
Denominator 8

k	a_k	b_k
0	988 231 697 578.125	1
2	-58 305 670 157 109.375	-59
4	534 633 348 389 765.625	541
6	-1 833 169 799 007 421.875	-1 855
8	3 117 871 005 858 984.375	3 155
10	-2 847 095 520 722 578.125	-2 881
12	1 343 006 877 008 671.875	1 359
14	-257 928 473 067 890.625	-261

P^{11}_{16} Numerator 14 230 536 445 125
Denominator 8

k	a_k	b_k
1	26 682 255 834 609.375	15
3	-649 268 225 308 828.125	-365
5	4 445 263 822 045 921.875	2 499
7	-13 421 174 684 808 515.625	-7 545
9	21 283 546 070 740 078.125	11 965
11	-18 597 532 316 722 734.375	-10 455
13	8 511 639 611 240 390.625	4 785
15	-1 599 156 533 020 921.875	-899

P^{11}_{17} Numerator 14 230 536 445 125
Denominator 16

k	a_k	b_k
0	-4 447 042 639 101.5625	-5
2	409 127 922 797 343.75	460
4	-5 976 825 306 952 500.	-6 720
6	32 698 215 116 785 968.75	36 764
8	-87 846 880 292 812 265.625	-98 770
10	129 871 433 232 322 031.25	146 020
12	-108 329 958 688 514 062.5	-121 800
14	47 974 695 990 627 656.25	53 940
16	-8 795 360 931 615 070.3125	-9 889

P^{11}_{18} Numerator 412 685 556 908 625
Denominator 16

k	a_k	b_k
1	-128 964 236 533 945.3125	-5
3	4 642 712 515 222 031.25	180
5	-47 665 181 822 946 187.5	-1 848
7	217 175 774 323 163 906.25	8 420
9	-524 368 585 747 021 640.625	-20 330
11	723 747 295 428 501 093.75	28 060
13	-575 696 351 887 531 875.	-22 320
15	246 270 106 085 221 968.75	9 548
17	-43 976 804 658 075 351.5625	-1 705

P^{11}_{19} Numerator 2 063 427 784 543 125
Denominator 128

k	a_k	b_k
0	16 120 529 566 743.16406 25	1
2	-2 079 548 314 109 868.16406 25	-129
4	43 138 537 120 604 707.03125	2 676
6	-338 982 495 729 475 253.90625	-21 028
8	1 322 882 897 306 077 529.29687 5	82 062
10	-2 895 988 654 547 142 451.17187 5	-179 646
12	3 740 027 341 602 681 035.15625	232 004
14	-2 836 503 900 445 860 175.78125	-175 956
16	1 170 882 424 021 256 235.35156 25	72 633
18	-203 392 721 543 598 500.97656 25	-12 617

TABLE 1 (Continued)

P^{11}_{20} Numerator 21 322 087 106 945 625
Denominator 128

k	a_k	b_k
1	499 736 416 569 038.08593 75	3
3	-24 487 084 411 882 866.21093 75	-147
5	345 817 600 265 774 355.46875	2 076
7	-2 192 843 395 904 939 121.09375	-13 164
9	7 480 387 840 816 408 095.70312 5	44 906
11	-14 961 775 154 465 954 267.57812 5	-89 818
13	18 125 772 986 570 057 402.34375	108 812
15	-13 112 417 255 549 467 324.21875	-78 716
17	5 220 413 186 285 694 858.39843 75	31 339
19	-881 368 460 022 260 170.89843 75	-5 291

P^{11}_{21} Numerator 4 264 417 421 389 125
Denominator 256

k	a_k	b_k
0	-49 973 641 656 903.80859 375	-3
2	8 495 519 081 673 647.46093 75	510
4	-234 126 511 162 594 343.26171 875	-14 055
6	2 468 697 897 851 048 144.53125	148 200
8	-13 091 594 904 859 090 737.30468 75	-785 910
10	39 647 154 976 443 414 791.01562 5	2 380 084
12	-72 937 362 892 278 723 706.05468 75	-4 378 550
14	83 108 831 336 319 401 894.53125	4 989 160
16	-57 390 646 262 218 710 358.88671 875	-3 445 255
18	22 034 211 500 556 504 272.46093 75	1 322 750
20	-3 613 610 686 091 266 700.68359 375	-216 931

P^{11}_{22} Numerator 4 264 417 421 389 125
Denominator 256

k	a_k	b_k
1	-1 649 130 174 677 825.68359 375	-99
3	104 444 911 062 928 959.96093 75	6 270
5	-1 921 236 653 499 666 921.38671 875	-115 335
7	16 029 545 297 868 465 644.53125	962 280
9	-72 937 362 892 278 723 706.05468 75	-4 378 550
11	198 509 497 175 452 488 416.01562 5	11 916 852
13	-337 848 303 630 747 905 112.30468 75	-20 281 590
15	363 025 190 876 301 566 894.53125	21 793 000
17	-239 531 910 112 413 343 718.26171 875	-14 379 495
19	88 697 716 840 422 000 834.96093 75	5 324 670
21	-14 125 932 681 993 133 466.30859 375	-848 003

P^{11}_{23} Numerator 4 264 417 421 389 125
Denominator 1 024

k	a_k	b_k
0	137 427 514 556 485.47363 28125	33
2	-29 546 915 629 644 376.83105 46875	-7 095
4	1 035 516 322 183 118 043.82324 21875	248 655
6	-13 993 556 669 714 133 352.66113 28125	-3 360 225
8	96 112 680 855 369 245 694.58007 8125	23 079 210
10	-382 544 787 031 264 604 572.99804 6875	-91 859 174
12	944 988 362 361 713 321 751.70898 4375	226 916 830
14	-1 495 480 424 790 182 999 381.10351 5625	-359 104 610
16	1 519 168 743 007 232 329 341.43066 40625	364 792 805
18	-958 838 744 548 080 425 692.74902 34375	-230 242 675
20	342 553 867 538 333 486 557.98339 84375	82 256 291
22	-52 972 247 557 474 250 498.65722 65625	-12 720 045

P^{11}_{24} Numerator 21 322 087 106 945 625
Denominator 1 024

k	a_k	b_k
1	4 809 963 009 476 991.57714 84375	231
3	-379 987 077 748 682 334.59472 65625	-18 249
5	8 768 562 566 276 555 645.14160 15625	421 113
7	-92 515 515 661 853 238 422.24121 09375	-4 443 087
9	538 243 567 503 063 934 896.24023 4375	25 849 318
11	-1 902 225 222 648 832 386 236.57226 5625	-91 354 970
13	4 300 099 642 649 688 838 165.28320 3125	206 513 650
15	-6 355 187 419 610 219 557 332.76367 1875	-305 257 918
17	6 118 847 374 243 228 705 036.01074 21875	293 859 587
19	-3 698 549 489 718 009 848 919.06738 28125	-177 624 013
21	1 275 408 729 653 033 877 390.74707 03125	61 251 909
23	-191 515 048 861 637 674 879.76074 21875	-9 197 571

P^{11}_{25} Numerator 63 966 261 320 836 875
Denominator 2 048

k	a_k	b_k
0	-343 568 786 391 213.68408 20312 5	-11
2	90 702 159 607 280 412.59765 625	2 904
4	-3 918 745 577 578 183 280.63964 84375	-125 466
6	65 673 860 656 253 278 139.64843 75	2 102 672
8	-564 086 006 954 904 448 714.29443 35937 5	-18 060 273
10	2 840 214 443 338 885 283 569.33593 75	90 934 800
12	-9 020 259 185 175 196 656 607.27539 0625	-288 800 540
14	18 789 049 811 249 368 432 031.25	601 566 720
16	-26 044 577 826 153 849 274 018.24951 17187 5	-833 866 077
18	23 813 062 671 221 501 531 857.91015 625	762 419 928
20	-13 801 307 882 858 868 187 611.69433 59375	-441 874 794
22	4 596 361 172 679 304 197 114.25781 25	147 161 136
24	-670 302 671 015 731 862 079.16259 76562 5	-21 460 999

TABLE 1 (Continued)

P^{12}_{12} Numerator 316 234 143 225
Denominator 1

k	a_k	b_k
0	316 234 143 225.	1
2	-1 897 404 859 350.	-6
4	4 743 512 148 375.	15
6	-6 324 682 864 500.	-20
8	4 743 512 148 375.	15
10	-1 897 404 859 350.	-6
12	316 234 143 225.	1

P^{12}_{13} Numerator 7 905 853 580 625
Denominator 1

k	a_k	b_k
1	7 905 853 580 625.	1
3	-47 435 121 483 750.	-6
5	118 587 803 709 375.	15
7	-158 117 071 612 500.	-20
9	118 587 803 709 375.	15
11	-47 435 121 483 750.	-6
13	7 905 853 580 625.	1

P^{12}_{14} Numerator 7 905 853 580 625
Denominator 2

k	a_k	b_k
0	-3 952 926 790 312.5	-1
2	130 446 584 080 312.5	33
4	-699 668 041 885 312.5	-177
6	1 679 993 885 882 812.5	425
8	-2 193 874 368 623 437.5	-555
10	1 624 652 910 818 437.5	411
12	-644 327 066 820 937.5	-163
14	106 729 023 338 437.5	27

P^{12}_{15} Numerator 71 152 682 225 625
Denominator 2

k	a_k	b_k
1	-106 729 023 338 437.5	-3
3	1 672 088 032 302 187.5	47
5	-7 791 218 703 705 937.5	-219
7	17 610 288 850 842 187.5	495
9	-22 235 213 195 507 812.5	-625
11	16 116 082 524 104 062.5	453
13	-6 297 012 376 967 812.5	-177
15	1 031 713 892 271 562.5	29

P^{12}_{16} Numerator 71 152 682 225 625
Denominator 8

k	a_k	b_k
0	26 682 255 834 609.375	3
2	-1 707 664 373 415 000.	-192
4	17 681 441 533 067 812.5	1 988
6	-71 721 903 683 430 000.	-8 064
8	151 288 390 582 235 156.25	17 010
10	-183 289 309 413 210 000.	-20 608
12	129 248 847 262 847 812.5	14 532
14	-49 522 266 829 035 000.	-5 568
16	7 995 782 665 104 609.375	899

P^{12}_{17} Numerator 412 685 556 908 625
Denominator 8

k	a_k	b_k
1	773 785 419 203 671.875	15
3	-20 634 277 845 431 250.	-400
5	160 328 338 859 000 812.5	3 108
7	-571 982 181 875 354 250.	-11 088
9	1 123 020 571 737 595 781.25	21 770
11	-1 299 959 504 262 168 750.	-25 200
13	888 305 661 245 815 312.5	17 220
15	-332 624 558 868 351 750.	-6 448
17	52 772 165 589 690 421.875	1 023

P^{12}_{18} Numerator 2 063 427 784 543 125
Denominator 16

k	a_k	b_k
0	-128 964 236 533 945.3125	-1
2	12 767 459 416 860 585.9375	99
4	-205 826 921 508 176 718.75	-1 596
6	1 281 904 511 147 416 406.25	9 940
8	-4 067 789 948 753 703 046.875	-31 542
10	7 436 851 663 966 490 390.625	57 666
12	-8 207 799 869 966 415 468.75	-63 644
14	5 421 140 646 940 925 156.25	42 036
16	-1 978 956 209 613 390 820.3125	-15 345
18	307 837 632 606 527 460.9375	2 387

P^{12}_{19} Numerator 63 966 261 320 836 875
Denominator 16

k	a_k	b_k
1	-3 997 891 332 552 304.6875	-1
3	155 917 761 969 539 882.8125	39
5	-1 775 063 751 653 223 281.25	-444
7	9 227 133 195 530 719 218.75	2 308
9	-26 314 120 750 859 269 453.125	-6 582
11	44 880 328 099 232 172 421.875	11 226
13	-47 191 109 289 447 404 531.25	-11 804
15	30 080 134 386 123 540 468.75	7 524
17	-10 686 363 531 912 310 429.6875	-2 673
19	1 627 141 772 348 788 007.8125	407

P^{12}_{20} Numerator 63 966 261 320 836 875
Denominator 128

k	a_k	b_k
0	499 736 416 569 038.08593 75	1
2	-68 963 625 486 527 255.85937 5	-138
4	1 557 678 410 445 691 713.86718 75	3 117
6	-13 620 815 770 005 702 070.3125	-27 256
8	60 744 960 379 632 855 498.04687 5	121 554
10	-157 099 138 858 309 088 847.65625	-314 364
12	250 596 823 979 876 700 498.04687 5	501 458
14	-251 063 577 792 952 182 070.3125	-502 392
16	154 309 110 444 604 149 213.86718 75	308 781
18	-53 288 893 044 422 807 255.85937 5	-106 634
20	7 932 316 140 200 341 538.08593 75	15 873

P^{12}_{21} Numerator 234 542 958 176 401 875
Denominator 128

k	a_k	b_k
1	16 491 301 746 778 256.83593 75	9
3	-868 541 891 996 988 193.35937 5	-474
5	13 407 428 320 130 722 807.61718 75	7 317
7	-94 857 967 647 468 533 320.3125	-51 768
9	370 288 359 954 715 966 435.54687 5	202 082
11	-875 248 354 707 344 684 472.65625	-477 660
13	1 309 398 364 493 029 073 935.54687 5	714 594
15	-1 250 685 665 540 776 973 320.3125	-682 552
17	740 959 684 583 329 339 057.61718 75	404 373
19	-248 545 905 726 277 368 193.35937 5	-135 642
21	36 136 106 860 912 667 006.83593 75	19 721

TABLE 1 (Continued)

P_{22}^{12}

Numerator 46 908 591 635 280 375
Denominator 256

k	a_k	b_k
0	-1 649 130 174 677 825.68359 375	-9
2	298 492 561 616 686 448.73046 875	1 629
4	-8 875 068 890 057 831 887.20703 125	-48 435
6	102 600 633 817 580 924 904.78515 625	559 935
8	-608 347 630 136 903 116 420.89843 75	-3 320 010
10	2 110 567 106 037 698 648 870.11718 75	11 518 802
12	-4 590 537 444 375 175 254 875.97656 25	-25 052 502
14	6 458 922 774 036 767 218 754.88281 25	35 249 070
16	-5 887 169 426 292 534 677 683.10546 875	-32 128 765
18	3 361 970 990 754 911 421 892.08984 375	18 347 745
20	-1 094 924 037 885 053 810 307.12890 625	-5 975 463
22	155 385 259 501 924 468 129.39453 125	848 003

P_{23}^{12}

Numerator 21 322 087 106 945 625
Denominator 256

k	a_k	b_k
1	-57 719 556 113 723 898.92578 125	-693
3	3 905 689 963 695 317 160.64453 125	46 893
5	-77 748 242 085 186 091 053.02734 375	-933 471
7	712 5[illegible]7 220 164 097 432 145.99609 375	8 559 639
9	-3 633 22[illegible] 608 601 907 554 340.82031 25	-43 621 666
11	11 339 960 [illegible]8 340 559 861 020.50781 25	136 150 098
13	-22 826 702 [illegible]71 785 988 634 838.86718 75	-274 064 910
15	30 288 [illegible] 587 [illegible]76 449 266 987.30468 75	363 655 166
17	-26 374 109 859 908 841 638 518.06640 625	-316 656 249
19	14 521 787 30[illegible] 151 [illegible]13 136 701.66015 625	174 353 361
21	-4 590 928 121 647 768 376 550.29296 875	-55 120 195
23	635 666 970 689 691 005 983.88671 875	7 632 027

P_{24}^{12}

Numerator 63 966 261 320 836 875
Denominator 1 024

k	a_k	b_k
0	[illegible]09 963 009 476 991.57714 84375	77
2	-1 0[illegible]1 566 160 754 079.58984 375	-17 556
4	41 1[illegible]03 287 142 001 883.54492 1875	659 274
6	-503 76[illegible] 796 801 589 890 729.98046 875	-9 665 348
8	4 566 645 533 542 015 698 799.43847 65625	73 104 867
10	-20 386 233 884 634 092 313 70[illegible].05468 75	-326 351 784
12	57 803 520 577 094 787 282 385.25390 625	925 344 140
14	-108 243 110 222 102 359 874 487.30468 75	-1 732 803 240
16	135 801 342 460 185 985 772 276.00097 65625	2 173 967 523
18	-113 104 371 924 344 788 064 714.35546 875	-1 810 624 452
20	60 070 528 730 175 800 065 477.29492 1875	961 635 402
22	-18 434 342 150 001 039 173 532.71484 375	-295 105 044
24	2 489 695 635 201 289 773 436.88964 84375	39 856 141

P_{25}^{12}

Numerator 2 366 751 668 870 964 375
Denominator 1 024

k	a_k	b_k
1	177 968 631 350 648 638.35449 21875	77
3	-14 949 365 033 454 489 821.77734 375	-6 468
5	370 530 690 472 050 569 1[illegible]4.05273 4375	160 314
7	-4 249 992 613 014 262 477 155.76171 875	-1 838 804
9	27 273 972 419 479 033 938 264.77050 78125	11 800 371
11	-108 243 110 222 102 359 874 487.30468 75	-46 832 520
13	281 087 215 727 841 551 360 852.05078 125	121 615 340
15	-491 869 444 463 459 062 112 416.99218 75	-212 812 488
17	584 902 595 038 910 123 217 551.87988 28125	253 064 259
19	-466 530 659 026 949 376 007 097.16796 875	-201 849 396
21	239 133 024 627 533 374 212 630.61523 4375	103 463 418
23	-71 243 598 176 529 215 0[illegible] 270.99609 375	-30 824 292
25	9 384 237 394 220 246 009 108.27636 71875	4 060 189

TABLE 1 (Continued)

P_{13}^{13} Numerator 7 905 853 580 625
Denominator 1

k	a_k	b_k
0	7 905 853 580 625.	1
2	-47 435 121 483 750.	-6
4	118 587 803 709 375.	15
6	-158 117 071 612 500.	-20
8	118 587 803 709 375.	15
10	-47 435 121 483 750.	-6
12	7 905 853 580 625.	1

P_{14}^{13} Numerator 213 458 046 676 875
Denominator 1

k	a_k	b_k
1	213 458 046 676 875.	1
3	-1 280 748 280 061 250.	-6
5	3 201 870 700 153 125.	15
7	-4 269 160 933 537 500.	-20
9	3 201 870 700 153 125.	15
11	-1 280 748 280 061 250.	-6
13	213 458 046 676 875.	1

P_{15}^{13} Numerator 213 458 046 676 875
Denominator 2

k	a_k	b_k
0	-106 729 023 338 437.5	-1
2	3 735 515 81[illegible] 845 312.5	35
4	-20 171 785 410 964 [illegible]87.5	-189
6	48 561 705 618 989 [illegible]62.5	455
8	-63 503 768 886 370 312.5	-595
10	47 067 499 292 250 937.5	441
12	-18 677 579 084 226 562.5	-175
14	3 095 141 676 814 687.5	29

P_{16}^{13} Numerator 2 063 427 784 543 125
Denominator 2

k	a_k	b_k
1	-3 095 141 676 814 687.5	-3
3	50 553 980 721 306 562.5	49
5	-238 325 909 114 730 937.5	-231
7	541 649 793 442 570 312.5	525
9	-686 089 738 360 589 062.5	-665
11	498 317 809 967 164 687.5	483
13	-194 993 925 639 325 312.5	-189
15	31 983 130 660 418 437.5	31

P_{17}^{13} Numerator 6 190 283 353 629 375
Denominator 8

k	a_k	b_k
0	773 785 419 203 671.875	1
2	-52 617 408 505 849 687.5	-68
4	563 315 785 180 273 125.	728
6	-2 318 261 115 934 200 937.5	-2 996
8	4 929 013 120 327 389 843.75	6 370
10	-6 001 479 711 343 679 062.5	-7 756
12	4 246 534 380 589 751 250.	5 488
14	-1 631 139 663 681 340 312.5	-2 108
16	263 860 827 948 452 109.375	341

P_{18}^{13} Numerator 191 898 783 962 510 625
Denominator 8

k	a_k	b_k
1	23 987 347 995 313 828.125	1
3	-6[illegible] 645 743 868 787 187.5	-28
5	5 373 165 950 950 297 500.	224
7	-19 477 726 572 194 828 437.5	-812
9	38 619 630 272 455 263 281.25	1 610
11	-45 000 264 830 208 741 562.5	-1 876
13	30 895 704 217 964 210 625.	1 288
15	-11 609 876 429 731 892 812.5	-484
17	1 847 025 795 639 164 765.625	77

P_{19}^{13} Numerator 63 966 261 320 836 875
Denominator 16

k	a_k	b_k
0	-3 997 841 332 552 304.6875	-1
2	419 778 589 917 991 992.1875	105
4	-7 032 280 310 622 265 468.75	-1 764
6	45 112 205 736 520 206 093.75	11 284
8	-145 579 214 383 559 622 890.625	-36 414
10	269 162 031 855 416 465 390.625	67 326
12	-299 4[illegible]2 060 808 167 621 093.75	-74 900
14	198 991 064 273 132 890 468.75	49 764
16	-72 957 518 927 747 008 242.1875	-18 249
18	11 389 992 406 441 516 054.6875	2 849

P_{20}^{13} Numerator 2 110 886 623 587 616 875
Denominator 16

k	a_k	b_k
1	-131 930 413 974 226 054.6875	-1
3	5 409 146 972 943 268 242.1875	41
5	-63 854 320 363 525 410 468.75	-484
7	340 380 468 053 503 221 093.75	2 580
9	-987 631 079 011 056 245 390.625	-7 486
11	1 705 332 531 030 845 982 890.625	12 926
13	-1 809 557 558 070 484 566 093.75	-13 716
15	1 161 515 364 629 086 185 468.75	8 804
17	-414 921 151 948 940 941 992.1875	-3 145
19	63 458 529 121 602 732 304.6875	481

P_{21}^{13} Numerator 2 110 886 623 587 616 875
Denominator 128

k	a_k	b_k
0	16 491 301 746 778 256.83593 75	1
2	-2 407 730 055 029 625 498.04687 5	-146
4	56 812 534 517 651 094 799.80468 75	3 445
6	-513 341 240 773 713 578 789.0625	-31 128
8	2 344 964 160 581 387 452 529.29687 5	142 194
10	-6 171 902 661 335 256 177 363.28125	-374 252
12	9 975 027 722 366 777 099 326.17187 5	604 866
14	-10 094 655 625 237 906 574 414.0625	-612 120
16	6 253 716 009 301 023 109 526.36718 75	379 213
18	-2 173 454 622 414 893 581 435.54687 5	-131 794
20	325 224 961 748 214 003 061.52343 75	19 721

TABLE 1 (Continued)

P_{22}^{13}

Numerator 234 542 958 176 401 875
Denominator 128

k	a_k	b_k
1	577 195 561 137 238 989.25781 25	315
3	-31 938 154 382 927 224 072.26562 5	-17 430
5	512 665 097 402 095 670 258.78906 25	279 783
7	-3 738 512 140 787 643 711 679.6875	-2 040 264
9	14 934 768 399 041 730 311 337.89062 5	8 150 534
11	-35 930 346 721 384 975 449 433.59375	-19 608 708
13	54 494 572 115 129 765 613 134.76562 5	29 739 990
15	-52 617 968 253 624 323 667 304.6875	-28 715 848
17	31 446 345 285 134 220 637 485.35156 25	17 161 599
19	-10 624 015 417 108 324 100 009.76562 5	-5 797 974
21	1 553 852 595 019 244 681 293.94531 25	848 003

P_{23}^{13}

Numerator 2 110 886 623 587 616 875
Denominator 256

k	a_k	b_k
0	-57 719 556 113 723 898.92578 125	-7
2	11 024 435 217 721 264 694.82421 875	1 337
4	-342 565 565 534 951 340 124.51171 875	-41 545
6	4 103 687 281 017 428 041 926.26953 125	497 679
8	-25 030 679 195 579 252 786 411.13281 25	-3 035 622
10	88 808 117 110 361 183 021 791.99218 75	10 770 298
12	-196 599 157 274 516 109 370 092.77343 75	-23 842 770
14	280 556 869 206 416 618 269 555.66406 25	34 024 830
16	-258 668 863 173 863 037 386 213.37890 625	-31 370 339
18	149 115 644 961 556 120 403 708.49609 375	18 084 157
20	-48 946 356 743 106 207 460 759.27734 375	-5 936 021
22	6 992 336 677 586 601 065 822.75390 625	848 003

P_{24}^{13}

Numerator 7 100 255 006 612 893 125
Denominator 256

k	a_k	b_k
1	-2 135 623 576 207 784 260.23390 625	-77
3	151 624 273 910 752 682 478.02734 375	5 467
5	-3 141 592 280 601 650 646 833.49609 375	-113 267
7	29 759 061 206 924 935 599 182.12890 625	1 073 325
9	-155 425 589 505 247 924 742 680.56406 25	-5 618 338
11	497 743 083 650 621 338 018 530.27343 75	17 920 910
13	-1 018 360 453 458 811 700 224 291.99218 75	-36 717 030
15	1 370 947 245 348 368 791 881 098.63281 25	49 429 562
17	-1 208 136 818 130 581 336 372 863.76953 125	-43 559 425
19	671 839 988 013 003 393 324 368.26171 875	24 225 383
21	-214 219 759 122 425 869 016 569.82421 875	-7 723 703
23	29 876 347 622 415 477 281 242.67578 125	1 077 193

P_{25}^{13}

Numerator 2 366 751 668 870 964 375
Denominator 1 024

k	a_k	b_k
0	177 968 631 350 648 688.35443 21875	77
2	-42 712 471 524 155 685 205.07812 5	-18 480
4	1 675 396 695 535 006 752 169.18945 3125	724 878
6	-25 480 836 762 260 476 603 842.77343 75	-11 024 552
8	198 734 951 947 979 516 454 761.35253 90625	85 984 767
10	-910 117 343 236 709 340 349 804.6875	-393 771 840
12	2 635 773 351 003 128 467 466 784.66796 875	1 140 395 060
14	-5 023 355 531 676 599 015 580 322.26562 5	-2 173 407 600
16	6 395 596 917 375 250 265 455 310.66894 53125	2 767 122 267
18	-5 392 998 579 331 338 494 767 294.92187 5	-2 333 337 552
20	2 894 509 551 035 507 995 747 628.17382 8125	1 252 339 998
22	-896 290 428 672 464 318 437 260.27343 75	-387 786 480
24	121 445 086 124 863 198 898 407.59277 34375	52 782 457

TABLE 1 (Continued)

P_{14}^{14} Numerator 213 458 046 676 875; Denominator 1

k	a_k	b_k
0	213 458 046 676 875.	1
2	-1 494 206 326 738 125.	-7
4	4 482 618 980 214 375.	21
6	-7 471 031 633 690 625.	-35
8	7 471 031 633 690 625.	35
10	-4 482 618 980 214 375.	-21
12	1 494 206 326 738 125.	7
14	-213 458 046 676 875.	-1

P_{15}^{14} Numerator 6 190 283 353 629 375; Denominator 1

k	a_k	b_k
1	6 190 283 353 629 375.	1
3	-43 331 983 475 405 625.	-7
5	129 995 950 426 216 875.	21
7	-216 659 917 377 028 125.	-35
9	216 659 917 377 028 125.	35
11	-129 995 950 426 216 875.	-21
13	43 331 983 475 405 625.	7
15	-6 190 283 353 629 375.	-1

P_{16}^{14} Numerator 6 190 283 353 629 375; Denominator 2

k	a_k	b_k
0	-3 095 141 676 814 687.5	-1
2	117 615 383 718 958 125.	38
4	-736 643 719 081 895 625.	-238
6	2 123 267 190 294 875 625.	686
8	-3 466 558 678 032 450 000.	-1 120
10	3 423 226 694 557 044 375.	1 106
12	-2 036 603 223 344 064 375.	-658
14	674 740 885 545 601 875.	218
16	-95 949 391 981 255 312.5	-31

P_{17}^{14} Numerator 191 898 783 962 510 625; Denominator 2

k	a_k	b_k
1	-95 949 391 981 255 312.5	-1
3	1 727 089 055 662 595 625.	18
5	-9 403 040 414 163 020 625.	-98
7	25 522 538 267 013 913 125.	266
9	-40 298 744 632 127 231 250.	-420
11	38 955 453 144 389 656 875.	406
13	-22 835 955 291 538 764 375.	-238
15	7 484 052 574 537 914 375.	78
17	-1 055 443 311 793 808 437.5	-11

P_{18}^{14} Numerator 191 898 783 962 510 625; Denominator 8

k	a_k	b_k
0	23 987 347 995 313 828.125	1
2	-1 751 076 403 657 909 453.125	-73
4	20 821 018 059 932 402 812.5	868
6	-98 731 924 348 711 716 562.5	-4 116
8	250 188 039 591 123 227 343.75	10 430
10	-379 144 022 413 930 367 343.75	-15 806
12	356 643 889 994 325 996 562.5	14 868
14	-205 043 850 663 942 602 812.5	-8 548
16	66 229 067 815 061 479 453.125	2 761
18	-9 235 128 978 195 823 828.125	-385

P_{19}^{14} Numerator 2 110 886 623 587 616 875; Denominator 8

k	a_k	b_k
1	791 582 483 845 356 328.125	3
3	-24 011 335 343 309 141 953.125	-91
5	214 254 992 294 143 112 812.5	812
7	-893 960 485 089 355 746 562.5	-3 388
9	2 109 303 458 619 926 162 343.75	7 994
11	-3 054 980 665 987 178 522 343.75	-11 578
13	2 785 314 899 823 860 466 562.5	10 556
15	-1 565 222 431 390 217 912 812.5	-5 932
17	496 849 939 026 935 321 953.125	1 883
19	-68 339 954 438 649 096 328.125	-259

P_{20}^{14} Numerator 2 110 886 623 587 616 875; Denominator 16

k	a_k	b_k
0	-131 930 413 974 226 054.6875	-1
2	14 776 206 365 113 318 125.	112
4	-270 589 279 061 137 638 164.0625	-2 051
6	1 935 683 033 829 844 674 375.	14 672
8	-7 186 777 370 831 990 103 046.875	-54 474
10	15 795 764 604 306 137 075 625.	119 728
12	-21 818 915 723 885 453 376 328.125	-165 382
14	19 232 288 027 506 777 348 125.	145 776
16	-10 538 205 677 019 254 570 273.4375	-79 877
18	3 280 317 813 055 156 623 750.	24 864
20	-444 209 703 851 219 126 132.8125	-3 367

P_{21}^{14} Numerator 2 110 886 623 587 616 875; Denominator 16

k	a_k	b_k
1	-4 617 564 489 097 911 914.0625	-35
3	203 172 837 520 308 124 218.75	1 540
5	-2 625 547 168 501 072 714 335.9375	-19 901
7	15 679 665 840 008 818 147 500.	118 848
9	-52 339 169 971 027 011 963 515.625	-396 718
11	107 356 527 345 730 812 837 187.5	813 736
13	-141 325 178 753 330 692 041 796.875	-1 071 210
15	120 248 767 399 292 182 901 250.	911 456
17	-64 137 047 240 672 176 903 945.3125	-486 143
19	19 545 726 969 453 641 549 843.75	148 148
21	-2 601 799 693 985 712 024 492.1875	-19 721

TABLE 1 (Continued)

P_{22}^{14} Numerator 2 110 886 623 587 616 875
Denominator 128

k	a_k	b_k
0	577 195 561 137 238 989.25781 25	35
2	-89 465 311 976 272 043 334.96093 75	-5 425
4	2 275 882 097 564 133 334 643.55468 75	138 005
6	-22 580 929 303 698 836 289 946.28906 25	-1 369 263
8	115 720 354 887 437 354 243 642.57812 5	7 017 054
10	-350 429 508 738 109 539 009 755.85937 5	-21 249 354
12	672 499 090 775 301 977 521 318.35937 5	40 779 018
14	-843 764 095 919 494 620 622 705.07812 5	-51 164 190
16	692 441 774 608 154 721 839 165.03906 25	41 988 303
18	-359 088 019 350 729 261 087 612.30468 75	-21 774 389
20	106 999 012 415 162 407 007 241.21093 75	6 488 209
22	-13 984 673 355 173 202 131 645.50781 25	-848 003

P_{23}^{14} Numerator 78 102 805 072 741 824 375
Denominator 128

k	a_k	b_k
1	21 356 235 762 077 842 602.53906 25	35
3	-1 260 017 909 962 592 713 549.80468 75	-2 065
5	21 881 599 161 824 957 530 561.52343 75	35 861
7	-175 623 305 878 529 454 039 731.44531 25	-287 823
9	787 958 454 321 294 819 072 275.39062 5	1 291 358
11	-2 181 573 653 073 470 946 397 529.29687 5	-3 575 306
13	3 927 796 168 889 832 655 773 779.29687 5	6 437 130
15	-4 699 815 549 194 641 834 718 525.39062 5	-7 702 366
17	3 718 757 062 003 462 316 811 606.44531 25	6 094 543
19	-1 873 621 004 631 460 871 637 436.52343 75	-3 070 613
21	545 402 260 851 754 883 134 174.80468 75	893 841
23	-69 923 366 775 866 010 658 227.53906 25	-114 595

P_{24}^{14} Numerator 78 102 805 072 741 824 375
Denominator 256

k	a_k	b_k
0	-2 135 623 576 207 784 260.25390 625	-7
2	431 395 962 393 972 420 571.28906 25	1 414
4	-14 342 847 937 811 479 091 865.23437 5	-47 012
6	186 392 954 484 262 994 666 440.42968 75	610 946
8	-1 253 594 869 512 606 644 688 215.33203 125	-4 108 947
10	4 999 993 917 641 090 943 975 791.01562 5	16 388 636
12	-12 741 642 805 313 930 764 897 265.625	-41 763 680
14	21 582 569 148 684 343 578 440 771.48437 5	70 741 860
16	-24 651 167 647 264 989 093 981 979.98046 875	-80 799 901
18	18 806 783 863 013 971 155 038 715.82031 25	61 643 582
20	-9 201 915 067 703 967 002 622 744.14062 5	-30 161 404
22	2 615 133 917 417 388 798 617 709.96093 75	8 571 706
24	-328 839 823 846 570 250 093 669.43359 375	-1 077 193

P_{25}^{14} Numerator 92 303 315 085 967 610 625
Denominator 256

k	a_k	b_k
1	-83 289 319 472 103 586 149.90234 375	-231
3	6 274 462 066 898 470 156 625.97656 25	17 402
5	-139 481 847 009 282 805 605 703.125	-386 848
7	1 436 994 595 010 273 272 015 034.17968 75	3 985 454
9	-8 306 233 624 575 175 337 679 001.46484 375	-23 037 047
11	29 809 045 525 564 122 928 901 806.64062 5	82 674 340
13	-70 326 977 443 472 386 218 124 511.71875	-195 049 400
15	112 376 261 741 357 202 378 445 615.23437 5	311 671 612
17	-122 656 362 097 465 093 967 632 551.26953 125	-340 183 109
19	90 248 182 496 698 190 883 556 333.00781 25	250 300 162
21	-42 874 465 839 078 278 971 601 191.40625	-118 910 824
23	11 890 786 353 721 359 957 934 584.96093 75	32 978 678
25	-1 463 941 033 498 358 386 780 891.11328 125	-4 060 189

TABLE 1 (Continued)

P^{15}_{15} Numerator 6 190 283 353 629 375
Denominator 1

k	a_k	b_k
0	6 190 283 353 629 375.	1
2	-43 331 983 475 405 625.	-7
4	129 995 950 426 216 875.	21
6	-216 659 917 377 0_3 125.	-35
8	216 659 917 377 028 125.	35
10	-129 995 950 426 216 875.	-21
12	43 331 983 475 405 625.	7
14	-6 190 283 353 629 375.	-1

P^{15}_{16} Numerator 191 898 783 962 510 625
Denominator 1

k	a_k	b_k
1	191 898 783 962 510 625.	1
3	-1 343 291 487 737 574 375.	-7
5	4 029 874 463 212 723 125.	21
7	-6 716 457 438 687 871 875.	-35
9	6 716 457 438 687 871 875.	35
11	-4 029 874 463 212 723 125.	-21
13	1 343 291 487 737 574 375.	7
15	-191 898 783 962 510 625.	-1

P^{15}_{17} Numerator 191 898 783 962 510 625
Denominator 2

k	a_k	b_k
0	-95 949 391 981 255 312.5	-1
2	3 837 975 679 250 212 500.	40
4	-24 179 246 779 276 338 750.	-252
6	69 851 157 362 353 867 500.	728
8	-114 179 776 457 693 821 875.	-1 190
10	112 836 484 969 956 247 500.	1 176
12	-67 164 574 386 878 718 750.	-700
14	22 260 258 939 651 232 500.	232
16	-3 166 329 935 381 425 312.5	-33

P^{15}_{18} Numerator 2 110 886 623 587 616 875
Denominator 2

k	a_k	b_k
1	-3 166 329 935 381 425 312.5	-3
3	59 104 825 460 453 272 500.	56
5	-325 076 540 032 492 998 750.	-308
7	886 572 381 906 799 087 500.	840
9	-1 403 739 604 685 765 221 875.	-1 330
11	1 359 410 985 590 425 267 500.	1 288
13	-797 915 143 716 119 178 750.	-756
15	261 749 941 324 864 492 500.	248
17	-36 940 515 912 783 295 312.5	-35

P^{15}_{19} Numerator 2 110 886 623 587 616 875
Denominator 8

k	a_k	b_k
0	791 582 483 845 356 328.125	3
2	-60 951 851 256 092 437 265.625	-231
4	746 198 421 438 222 565 312.5	2 828
6	-3 583 230 043 539 979 645 312.5	-13 580
8	9 142 777 688 413 865 589 843.75	34 650
10	-13 915 492 344 345 467 344 218.75	-52 738
12	13 128 659 355 403 183 154 062.5	49 756
14	-7 564 362 215 626 225 071 562.5	-28 668
16	2 447 309 179 221 893 314 453.125	9 275
18	-341 699 772 193 245 481 640.625	-1 295

P^{15}_{20} Numerator 14 776 206 365 113 318 125
Denominator 8

k	a_k	b_k
1	27 705 386 934 587 471 484.375	15
3	-877 337 252 928 603 263 671.875	-475
5	8 030 868 159 439 088 400 937.5	4 348
7	-33 977 886 536 578 075 028 437.5	-18 396
9	80 859 095 281 491 355 109 531.25	43 778
11	-117 784 834 987 909 537 103 906.25	-63 770
13	107 829 365 949 414 439 017 187.5	58 380
15	-60 781 924 882 893 634 107 187.5	-32 908
17	19 340 207 106 137 694 260 859.375	10 471
19	-2 665 258 223 107 314 756 796.875	-1 443

P^{15}_{21} Numerator 14 776 206 365 113 318 125
Denominator 16

k	a_k	b_k
0	-4 617 564 489 097 911 914.0625	-5
2	544 872 609 713 553 605 859.375	590
4	-10 347 962 020 068 420 599 414.0625	-11 205
6	75 779 774 343 483 652 004 062.5	82 056
8	-285 515 094 515 697 728 635 078.125	-309 162
10	633 710 856 432 206 152 756 406.25	686 196
12	-881 446 885 323 900 405 275 390.625	-954 450
14	780 959 446 912 151 646 201 562.5	845 640
16	-429 619 123 578 567 544 066 757.8125	-465 201
18	134 151 330 563 068 176 092 109.375	145 262
20	-18 212 597 857 899 984 171 445.3125	-19 721

TABLE 1 (Continued)

P_{22}^{15} Numerator 78 102 805 072 741 824 375
Denominator 16

k	a_k	b_k
1	-170 849 886 096 622 740 820.3125	-35
3	7 859 094 760 444 646 077 734.375	1 610
5	-104 867 660 086 107 038 315 507.8125	-21 483
7	640 247 744 583 801 105 314 062.5	131 160
9	-2 169 725 213 472 670 159 321 640.625	-444 486
11	4 498 545 840 878 515 414 895 156.25	921 564
13	-5 969 153 320 443 805 318 780 078.125	-1 222 830
15	5 109 915 073 286 670 230 646 562.5	1 046 808
17	-2 738 552 824 242 765 912 608 789.0625	-561 015
19	837 779 501 463 399 271 886 484.375	171 626
21	-111 877 386 841 385 617 053 164.0625	-22 919

P_{23}^{15} Numerator 78 102 805 072 741 824 375
Denominator 128

k	a_k	b_k
0	21 356 235 762 077 842 602.53906 25	35
2	-3 481 066 429 218 688 344 213.86718 75	-5 705
4	92 066 732 370 317 579 459 545.89843 75	150 885
6	-940 362 044 322 963 981 043 520.50781 25	-1 541 127
8	4 921 900 875 418 983 212 328 837.89062 5	8 066 334
10	-15 135 617 036 782 723 102 682 607.41187 5	-24 805 242
12	29 381 012 199 564 688 583 183 935.54687 5	48 151 530
14	-37 188 424 869 465 106 281 820 166.01562 5	-60 946 830
16	30 730 260 733 788 394 938 695 668.94531 25	50 362 767
18	-16 024 809 540 219 748 572 850 444.33593 75	-26 262 509
20	4 796 742 960 824 408 331 154 409.17968 75	7 861 217
22	-629 310 300 982 794 095 924 047.85156 25	-1 031 355

P_{24}^{15} Numerator 1 015 336 465 945 643 716 875
Denominator 128

k	a_k	b_k
1	832 893 194 721 035 861 499.02343 75	105
3	-51 361 747 007 797 211 459 106.44531 25	-6 475
5	923 567 500 519 665 965 620 883.78906 25	116 431
7	-7 614 047 819 707 083 234 553 315.42968 75	-959 877
9	34 864 322 139 628 186 337 075 302.73437 5	4 395 226
11	-98 035 415 853 574 619 065 788 720.70312 5	-12 358 990
13	178 037 266 617 378 329 502 587 548.82812 5	22 520 190
15	-215 781 415 738 861 496 001 124 130.85937 5	-27 202 826
17	172 043 029 089 919 962 977 536 713.86718 75	21 688 877
19	-87 222 407 716 215 261 695 073 032.22656 25	-10 995 831
21	25 522 028 873 191 093 890 253 051.75781 25	3 217 475
23	-3 286 398 238 465 702 500 936 694.33593 75	-414 305

P_{25}^{15} Numerator 1 015 336 465 945 643 716 875
Denominator 256

k	a_k	b_k
0	-83 289 319 472 103 586 149.90234 375	-21
2	17 657 335 728 085 960 263 779.29687 5	4 452
4	-610 732 816 582 444 896 041 850.58593 75	-153 986
6	8 192 892 725 405 922 757 612 060.54687 5	2 065 700
8	-56 504 247 730 698 742 377 353 713.37890 625	-14 246 595
10	229 864 084 927 630 733 152 131 152.34375	57 956 360
12	-594 959 485 260 817 918 896 782 080.07812 5	-150 009 020
14	1 020 357 463 416 067 729 061 777 636.71875	257 265 960
16	-1 177 176 953 982 196 070 666 421 350.09765 625	-296 805 355
18	905 507 599 747 464 838 024 046 630.85937 5	228 308 500
20	-446 097 095 356 669 974 797 360 053.71093 75	-112 475 874
22	127 512 251 652 469 257 036 343 740.23437 5	32 150 068
24	-16 103 351 368 481 942 254 589 802.24609 375	-4 060 189

TABLE 1 (Continued)

P_{16}^{16} Numerator 191 898 783 962 510 625
Denominator 1

k	a_k	b_k
0	191 898 783 962 510 625.	1
2	-1 535 190 271 700 085 000.	-8
4	5 373 165 950 950 297 500.	28
6	-10 746 331 901 900 595 000.	-56
8	13 432 914 877 375 743 750.	70
10	-10 746 331 901 900 595 000.	-56
12	5 373 165 950 950 297 500.	28
14	-1 535 190 271 700 085 000.	-8
16	191 898 783 962 510 625.	1

P_{17}^{16} Numerator 6 332 659 870 762 850 625
Denominator 1

k	a_k	b_k
1	6 332 659 870 762 850 625.	1
3	-50 661 278 966 102 805 000.	-8
5	177 314 476 381 359 817 500.	28
7	-354 628 952 762 719 635 000.	-56
9	443 286 190 953 399 543 750.	70
11	-354 628 952 762 719 635 000.	-56
13	177 314 476 381 359 817 500.	28
15	-50 661 278 966 102 805 000.	-8
17	6 332 659 870 762 850 625.	1

P_{18}^{16} Numerator 6 332 659 870 762 850 625
Denominator 2

k	a_k	b_k
0	-3 166 329 935 381 425 312.5	-1
2	136 152 187 221 401 288 437.5	43
4	-975 229 620 097 478 996 250.	-308
6	3 280 317 813 055 156 623 750.	1 036
8	-6 427 649 768 824 293 384 375.	-2 030
10	7 934 822 818 065 851 833 125.	2 506
12	-6 294 663 911 538 273 521 250.	-1 988
14	3 128 333 976 156 848 208 750.	988
16	-889 738 711 842 180 512 812.5	-281
18	110 621 547 738 349 885 937.5	35

P_{19}^{16} Numerator 73 881 031 825 566 590 625
Denominator 2

k	a_k	b_k
1	-110 821 547 738 349 886 937.5	-3
3	2 253 371 470 679 781 014 062.5	61
5	-14 037 396 346 857 652 218 750.	-380
7	44 476 281 158 951 067 556 250.	1 204
9	-84 298 257 312 971 479 503 125.	-2 282
11	101 881 542 867 456 328 471 875.	2 758
13	-79 643 752 307 960 784 693 750.	-2 156
15	39 156 946 867 550 245 031 250.	1 060
17	-11 045 214 257 922 205 298 437.5	-299
19	1 366 759 088 772 981 926 562.5	37

P_{20}^{16} Numerator 221 643 095 476 699 771 875
Denominator 8

k	a_k	b_k
0	27 705 386 934 587 471 484.375	1
2	-2 271 841 728 636 172 661 718.75	-82
4	30 503 631 014 980 806 104 296.875	1 101
6	-165 567 392 321 094 729 590 625.	-5 976
8	489 886 651 777 375 670 786 718.75	17 682
10	-891 337 708 459 548 132 595 312.5	-32 172
12	1 048 427 252 378 659 095 911 718.75	37 942
14	-803 899 507 293 990 072 590 625.	-29 016
16	389 565 445 687 234 436 541 796.875	14 061
18	-108 660 527 557 452 063 161 718.75	-3 922
20	13 326 291 115 536 573 785 984.375	481

P_{21}^{16} Numerator 1 640 158 906 527 578 311 875
Denominator 8

k	a_k	b_k
1	1 025 099 316 579 736 444 921.875	5
3	-34 853 376 763 711 039 127 343.75	-170
5	351 195 025 860 217 706 030 234.375	1 713
7	-1 677 882 561 377 712 613 048 125.	-8 184
9	4 624 017 997 227 875 155 753 593.75	22 554
11	-8 042 519 198 157 980 252 279 062.5	-39 228
13	9 170 538 486 122 322 236 271 093.75	44 730
15	-6 873 905 977 257 080 705 068 125.	-33 528
17	3 273 962 197 292 362 257 791 484.375	15 969
19	-900 857 279 410 272 387 797 343.75	-4 394
21	109 275 587 147 399 905 028 671.875	533

P_{22}^{16} Numerator 546 719 635 509 192 770 625
Denominator 16

k	a_k	b_k
0	-170 849 886 096 622 740 820.31[illegible]	-5
2	21 356 235 762 077 842 602 539.0[illegible]	625
4	-437 888 258 065 644 084 722 460.9375	-12 815
6	3 537 925 271 311 644 392 358 867.1875	103 539
8	-15 045 792 709 167 423 696 696 328.125	-440 322
10	38 635 378 182 300 318 767 238 515.625	1 130 682
12	-64 103 355 643 133 922 899 455 546.875	-1 876 014
14	70 679 572 778 856 248 140 918 359.375	2 068 470
16	-51 665 313 085 413 690 744 995 976.5625	-1 512 009
18	24 133 469 000 532 883 903 669 570.3125	706 277
20	-6 538 322 630 986 094 317 548 867.1875	-191 347
22	783 141 707 889 699 319 372 148.4375	22 919

P_{23}^{16} Numerator 3 046 009 397 836 931 150 625
Denominator 16

k	a_k	b_k
1	-6 663 145 557 768 286 891 992.1875	-35
3	326 494 132 330 646 057 707 617.1875	1 715
5	-4 721 504 942 234 608 091 665 664.0625	-24 801
7	31 852 310 648 768 153 850 282 539.0625	167 313
9	-121 824 765 115 313 331 752 853 046.875	-639 918
11	292 029 678 247 645 370 587 476 796.875	1 533 966
13	-461 875 923 773 382 110 779 114 453.125	-2 426 130
15	491 684 171 740 614 319 019 130 703.125	2 582 706
17	-349 907 093 191 532 264 188 699 335.9375	-1 837 983
19	160 034 097 377 367 160 914 489 960.9375	840 623
21	-42 625 284 386 567 920 097 255 507.8125	-223 901
23	5 034 482 407 862 352 767 392 382.8125	26 445

TABLE 1 (Continued)

P_{24}^{24} Numerator 15 230 046 989 184 655 753 125 / Denominator 128

k	a_k	b_k
0	832 893 194 721 035 861 [illegible]9.02343 75	7
2	-143 257 629 492 018 168 177 [illegible]22.03125	-1 204
4	4 052 858 285 512 560 502 05[illegible] 2[illegible]8.04687 5	34 062
6	-44 986 227 233 272 588 951 295 253.90625	-378 084
8	260 480 564 518 704 094 391 804 516.60156 25	2 189 193
10	-904 067 963 691 179 878 038 299 414.0625	-7 598 184
12	2 028 178 218 465 194 426 336 271 972.65625	17 045 700
14	-3 058 083 969 465 544 110 514 274 414.0625	-25 701 480
16	3 140 512 910 267 500 866 619 248 266.60156 25	26 394 249
18	-2 173 354 833 877 849 861 138 997 753.90625	-18 265 828
20	972 074 644 918 089 260 170 679 248.04687 5	8 169 742
22	-254 241 361 597 048 814 753 315 332.03125	-2 136 756
24	29 577 584 146 191 322 508 430 249.02343 75	248 583

P_{25}^{24} Numerator 208 143 975 518 856 961 959 375 / Denominator 128

k	a_k	b_k
1	34 148 620 983 562 470 321 459.96093 75	21
3	-2 231 043 237 592 748 061 002 050.78125	-1 372
5	43 050 028 186 611 087 585 253 857.42187 5	26 474
7	-386 490 840 042 342 556 958 253 222.65625	-237 676
9	1 959 615 362 892 114 877 256 949 243.16406 25	1 205 083
11	-6 220 057 483 419 292 094 152 860 351.5625	-3 825 080
13	13 095 085 517 303 312 369 071 322 753.90625	8 052 940
15	-18 834 831 263 715 7 130 662 741 601.5625	-11 582 648
17	18 653 490 703 418 759 [illegible]25 765 682 055.66406 25	11 471 131
19	-12 543 972 306 123 256 848 043 387 597.65625	-7 714 028
21	5 481 852 108 494 343 503 583 722 607.42187 5	3 371 [illegible]14
23	-1 406 578 446 063 320 67[illegible] 400 905 175.78125	-864 988
25	161 033 513 684 819 422 545 898 022.46093 75	99 029

TABLE 1 (Continued)

P_{17}^{17} Numerator 6 332 659 870 762 850 625
Denominator 1

k	a_k	b_k
0	6 332 659 870 762 850 625.	1
2	50 661 278 966 102 805 000.	-8
4	177 314 476 381 359 817 500.	28
6	-354 628 952 762 719 635 000.	-56
8	443 266 190 953 399 543 750.	70
10	-354 628 952 762 719 635 000.	-56
12	177 314 476 381 359 817 500.	28
14	-50 661 278 966 102 805 000.	-8
16	6 332 659 870 762 850 625.	1

P_{18}^{17} Numerator 221 643 095 476 699 771 875
Denominator 1

k	a_k	b_k
1	221 643 095 476 699 771 875.	1
3	-1 773 144 763 813 598 175 000.	-8
5	6 206 006 673 347 593 612 500.	28
7	-12 412 013 346 695 187 225 000.	-56
9	15 515 016 683 368 984 031 250.	70
11	-12 412 013 346 695 187 225 000.	-56
13	6 206 006 673 347 593 612 500.	28
15	-1 773 144 763 813 598 175 000.	-8
17	221 643 095 476 699 771 875.	1

P_{19}^{17} Numerator 221 643 095 476 699 771 875
Denominator 2

k	a_k	b_k
0	-110 821 547 738 349 885 937.5	-1
2	4 986 969 648 225 744 867 187.5	45
4	-35 906 181 467 225 363 043 750.	-324
6	121 017 130 130 278 075 443 750.	1 092
8	-237 379 755 255 545 455 678 125.	-2 142
10	293 233 815 315 673 798 190 625.	2 646
12	-232 725 250 250 534 760 468 750.	-2 100
14	115 697 695 838 837 280 918 750.	1 044
16	-32 913 999 678 289 916 123 437.5	-297
18	4 100 397 266 318 945 779 687.5	37

P_{20}^{17} Numerator 8 200 794 532 637 891 559 375
Denominator 2

k	a_k	b_k
1	-4 100 397 266 318 945 779 687.5	-1
3	86 1[illegible] 342 592 697 861 373 437.5	21
5	-541 [illegible] 439 154 100 847 916 750.	-132
7	1 722 16[illegible] 851 853 957 227 [illegible] 750.	420
9	-3 272 117 018 522 518 732 140 625.	-798
11	3 960 983 759 254 101 623 178 125.	966
13	-3 099 900 333 337 123 904 443 750.	-756
15	1 525 347 783 070 647 830 343 750.	372
17	-430 541 712 963 489 306 867 187.5	-105
19	53 305 164 462 146 295 135 937.5	13

P_{21}^{17} Numerator 8 200 794 532 637 891 559 375
Denominator 8

k	a_k	b_k
0	1 025 099 316 579 736 444 921.875	1
2	-88 158 541 235 857 334 263 281.25	-86
4	1 214 742 690 146 987 687 232 421.875	1 185
6	-6 667 245 955 034 665 837 771 875.	-6 504
8	19 847 972 967 616 857 046 577 343.75	19 362
10	-36 251 612 231 545 799 638 217 187.5	-35 364
12	42 752 792 097 274 488 171 911 718.75	41 706
14	-32 844 182 103 214 755 695 296 875.	-32 040
16	15 939 269 273 498 321 982 090 234.375	15 549
18	-4 450 981 232 589 215 643 850 781.25	-4 342
20	546 377 935 736 999 525 143 359.375	533

P_{22}^{17} Numerator 21 322 065 784 858 518 054 375
Denominator 8

k	a_k	b_k
1	34 978 873 346 609 721 351 953.125	15
3	-1 412 586 858 246 876 821 102 343.75	-530
5	14 560 305 672 835 260 516 381 328.125	5 463
7	70 426 783 287 387 685 133 600 625.	-26 424
9	195 560 956 862 276 112 965 213 906.25	73 374
11	-341 867 341 761 519 049 224 821 562.5	-128 268
13	391 233 254 569 922 733 150 213 281.25	146 730
15	-294 052 609 238 483 822 487 886 625.	-110 328
17	140 349 832 770 608 087 778 166 640.625	52 654
19	-38 683 557 859 179 566 380 149 843.75	-14 514
21	4 608 850 247 338 195 916 232 890.625	1 763

P_{23}^{17} Numerator 106 610 328 924 292 590 271 875
Denominator 16

k	a_k	b_k
0	-6 663 145 557 768 286 891 992.1875	-1
2	872 872 068 067 645 582 850 976.5625	131
4	-18 490 228 922 806 996 125 278 320.3125	-2 775
6	152 539 391 253 989 391 818 377 148.4375	22 893
8	-657 212 698 944 917 209 304 757 421.875	-98 634
10	1 702 340 405 971 988 544 887 516 015.625	255 486
12	-2 841 898 211 843 752 042 303 587 890.625	-426 510
14	3 147 736 592 945 316 41 646 029 296.875	472 410
16	-2 308 959 819 570 117 761 542 728 710.9375	-346 533
18	1 081 555 123 791 390 560 021 279 882.8125	162 319
20	-293 678 140 458 637 244 764 555 664.0625	-44 075
22	35 241 376 855 036 469 371 746 679.6875	5 289

TABLE 1 (Continued)

P_{24}^{17} Numerator 624 431 926 556 570 885 878 125
Denominator 16

k	a_k	b_k
1	-273 188 967 868 499 762 571 679.6875	-7
3	13 932 637 361 293 487 891 155 664.0625	357
5	-207 350 426 612 191 319 791 904 882.8125	-5 313
7	1 426 631 817 204 715 545 829 678 710.9375	36 555
9	-5 530 203 303 557 450 479 418 879 296.875	-141 702
11	13 383 527 535 877 803 368 386 587 890.625	342 930
13	-21 316 935 162 779 036 473 468 166 015.625	-546 210
15	22 815 103 462 569 889 171 411 257 421.875	584 598
17	-16 305 283 547 231 408 329 090 702 148.4375	-417 795
19	7 482 919 018 886 076 996 600 878 320.3125	191 737
21	-1 998 689 515 921 354 048 654 775 976.5625	-51 213
23	236 620 673 169 530 580 067 441 992.1875	6 063

P_{25}^{17} Numerator 4 371 023 485 895 996 201 146 875
Denominator 128

k	a_k	b_k
0	34 148 620 983 562 470 321 459.96093 75	1
2	-6 146 751 777 041 244 657 862 792.96875	-180
4	180 099 827 067 308 468 475 379 833.98437 5	5 274
6	-2 051 785 743 176 367 466 794 600 292.96875	-60 084
8	12 106 334 962 471 583 415 893 663 891.60156 25	354 519
10	-42 596 989 814 895 825 478 989 155 273.4375	-1 247 400
12	96 538 834 492 950 774 848 173 738 769.53125	2 827 020
14	-146 698 377 910 866 345 004 553 416 992.1875	-4 295 880
16	151 576 132 783 537 424 702 800 436 352.53906 25	4 438 719
18	-105 412 831 736 223 252 635 789 610 058.59375	-3 086 884
20	47 337 979 460 527 737 483 598 727 490.23437 5	1 386 234
22	-12 422 585 341 400 355 453 540 704 589.84375	-363 780
24	1 449 301 623 163 374 802 913 032 202.14843 75	42 441

TABLE 1 (Continued)

P_{18}^{18} Numerator 221 643 095 476 699 771 875
Denominator 1

k	a_k	b_k
0	221 643 095 476 699 771 875.	1
2	-1 994 787 859 290 297 946 875.	-9
4	7 979 151 437 161 191 787 500.	36
6	-18 618 020 020 042 780 837 500.	-84
8	27 927 030 030 064 171 256 250.	126
10	-27 927 030 030 064 171 256 250.	-126
12	18 618 020 020 042 780 837 500.	84
14	-7 979 151 437 161 191 787 500.	-36
16	1 994 787 859 290 297 946 875.	9
18	-221 643 095 476 699 771 875.	-1

P_{19}^{18} Numerator 8 200 794 532 637 891 559 375
Denominator 1

k	a_k	b_k
1	8 200 794 532 637 891 559 375.	1
3	-73 807 150 793 741 024 034 375.	-9
5	295 228 603 174 964 096 137 500.	36
7	-688 866 740 741 582 890 987 500.	-84
9	1 033 300 111 112 374 336 481 250.	126
11	-1 033 300 111 112 374 336 481 250.	-126
13	688 866 740 741 582 890 987 500.	84
15	-295 228 603 174 964 096 137 500.	-36
17	73 807 150 793 741 024 034 375.	9
19	-8 200 794 532 637 891 559 375.	-1

P_{20}^{18} Numerator 8 200 794 532 637 891 559 375
Denominator 2

k	a_k	b_k
0	-4 100 397 266 318 945 779 687.5	-1
2	196 819 068 783 309 397 425 000.	48
4	-1 586 853 742 065 432 016 739 062.5	-387
6	6 101 391 132 282 591 320 175 000.	1 488
8	-13 949 551 500 017 053 542 496 875.	-3 402
10	20 666 002,222 247 486 729 625 000.	5 040
12	-20 493 785 537 062 091 006 878 125.	-4 998
14	13 580 515 746 048 348 422 325 000.	3 312
16	-5 793 861 337 308 670 386 698 437.5	-1 413
18	1 443 339 837 744 268 914 450 000.	352
20	-159 915 493 386 438 885 407 812.5	-39

P_{21}^{18} Numerator 106 610 328 924 292 590 271 875
Denominator 2

k	a_k	b_k
1	-159 915 493 386 438 885 407 812.5	-3
3	3 624 751 183 425 948 069 243 750.	68
5	-25 426 563 448 443 782 779 842 187.5	-477
7	92 111 324 190 588 797 994 900 000.	1 728
9	-203 732 338 574 323 140 009 553 125.	-3 822
11	295 523 831 778 139 060 233 637 500.	5 544
13	-288 807 381 055 908 627 046 509 375.	-5 418
15	189 339 944 169 543 640 322 850 000.	3 552
17	-80 117 662 186 605 881 589 314 062.5	-1 503
19	19 829 521 179 918 421 790 568 750.	372
21	-2 185 511 742 947 998 100 573 437.5	-41

P_{22}^{18} Numerator 106 610 328 924 292 590 271 875
Denominator 8

k	a_k	b_k
0	39 978 873 346 609 721 351 953.125	3
2	-3 638 077 474 541 484 643 027 734.375	-273
4	54 437 899 206 966 903 907 576 171.875	4 085
6	-332 824 120 610 525 930 255 009 765.625	-24 975
8	1 126 204 862 173 995 850 484 519 531.25	84 510
10	-2 391 616 161 340 886 750 716 539 843.75	-179 466
12	3 376 695 600 601 350 284 828 664 843.75	253 386
14	-3 237 089 374 874 989 137 867 644 531.25	-242 910
16	2 091 894 547 861 353 669 740 947 265.625	156 975
18	-875 337 431 924 019 849 001 013 671.875	-65 685
20	214 726 528 744 640 813 381 340 234.375	16 113
22	-23 494 251 236 690 979 581 164 453.125	-1 763

P_{23}^{18} Numerator 4 371 023 485 895 996 201 146 875
Denominator 8

k	a_k	b_k
1	1 639 133 807 210 998 575 430 078.125	3
3	-61 740 706 738 280 946 341 199 609.375	-113
5	693 353 600 450 252 397 406 923 046.875	1 269
7	-3 732 307 679 019 443 756 254 287 890.625	-6 831
9	11 765 702 468 160 547 774 437 100 781.25	21 534
11	-23 888 736 106 293 093 238 317 958 593.75	-43 722
13	32 700 719 453 859 421 579 830 058 593.75	59 850
15	-30 648 523 927 231 251 363 391 600 781.25	-56 094
17	19 467 992 228 245 030 080 383 037 890.625	35 631
19	-8 036 673 056 755 526 015 333 673 046.875	-14 709
21	1 950 022 852 645 351 305 236 649 609.375	3 569
23	-211 448 261 130 218 816 230 480 078.125	-387

P_{24}^{18} Numerator 4 371 023 485 895 996 201 146 875
Denominator 16

k	a_k	b_k
0	-273 188 967 868 499 762 571 679.6875	-1
2	37 700 077 565 852 967 234 891 796.875	138
4	-855 627 847 364 141 256 374 500 781.25	-3 132
6	7 705 568 027 698 904 303 096 797 265.625	28 206
8	-36 932 143 377 174 614 402 302 805 273.4375	-135 189
10	108 507 379 769 753 683 696 320 311 718.75	397 188
12	-210 202 519 436 738 457 313 153 218 750.	-769 440
14	278 275 746 450 211 228 150 764 363 281.25	1 018 620
16	-254 374 716 840 364 052 423 130 679 101.5625	-931 131
18	158 480 744 906 066 871 264 507 390 234.375	580 114
20	-64 421 236 891 006 666 011 552 930 468.75	-235 812
22	15 435 723 062 505 973 584 825 045 703.125	56 502
24	-1 656 344 712 186 714 060 472 093 945.3125	-6 063

P_{25}^{18} Numerator 187 954 009 893 527 836 649 315 625
Denominator 16

k	a_k	b_k
1	-11 747 125 618 345 489 790 582 226.5625	-1
3	634 344 783 390 656 448 691 440 234.375	54
5	-10 149 516 534 250 503 179 063 043 750.	-864
7	76 332 822 268 008 992 659 203 308 203.125	6 498
9	-329 119 218 449 185 587 462 742 241 601.5625	-28 017
11	902 884 075 026 034 345 304 149 933 593.75	76 860
13	-1 667 621 952 780 325 730 671 052 882 812.5	-141 960
15	2 131 821 368 714 866 105 235 700 147 656.25	181 476
17	-1 897 430 971 252 018 547 444 212 981 054.6875	-161 523
19	1 157 585 252 683 001 254 943 553 769 921.875	98 542
21	-462 648 795 352 918 769 912 290 410 937.5	-39 384
23	109 318 751 004 323 127 991 158 200 390.625	9 306
25	-11 594 412 985 306 998 423 304 657 617.1875	-987

TABLE 1 (Continued)

P^{19}_{19} Numerator 8 200 794 532 637 891 559 375
Denominator 1

k	a_k	b_k
0	8 200 794 532 637 891 559 375.	1
2	-73 807 150 793 741 024 034 375.	-9
4	295 228 603 174 964 096 137 500.	36
6	-688 866 740 741 582 890 987 500.	-84
8	1 033 300 111 112 374 336 481 250.	126
10	-1 033 300 111 112 374 336 481 250.	-126
12	688 866 740 741 582 890 987 500.	84
14	-295 228 603 174 964 096 137 500.	-36
16	73 807 150 793 741 024 034 375.	9
18	-8 200 794 532 637 891 559 375.	-1

P^{19}_{20} Numerator 319 830 986 772 877 770 815 625
Denominator 1

k	a_k	b_k
1	319 830 986 772 877 770 815 625.	1
3	-2 878 478 880 955 899 937 340 625.	-9
5	11 513 915 523 823 599 749 362 500.	36
7	-26 865 802 888 921 732 748 512 500.	-84
9	40 298 704 333 382 599 122 768 750.	126
11	-40 298 704 333 382 599 122 768 750.	-126
13	26 865 802 888 921 732 748 512 500.	84
15	-11 513 915 523 823 599 749 362 500.	-36
17	2 878 478 880 955 899 937 340 625.	9
19	-319 830 986 772 877 770 815 625.	-1

P^{19}_{21} Numerator 319 830 986 772 877 770 815 625
Denominator 2

k	a_k	b_k
0	-159 915 493 386 438 885 407 812.5	-1
2	7 995 774 669 321 944 270 390 625.	50
4	-64 765 774 821 507 748 590 164 062.5	-405
6	249 468 169 682 844 661 236 187 500.	1 560
8	-570 898 311 389 586 820 905 890 625.	-3 570
10	846 272 791 001 034 581 578 143 750.	5 292
12	-839 556 340 278 804 148 391 015 625.	-5 250
14	556 505 916 984 807 321 219 187 500.	3 480
16	-237 474 507 678 861 744 830 601 562.5	-1 485
18	59 168 732 552 982 387 600 890 625.	370
20	-6 556 535 228 843 994 301 720 312.5	-41

P^{19}_{22} Numerator 4 371 023 485 895 996 201 146 875
Denominator 2

k	a_k	b_k
1	-6 556 535 228 843 994 301 720 312.5	-3
3	152 985 822 006 359 867 040 140 625.	70
5	-1 081 828 312 759 259 059 783 851 562.5	-495
7	3 933 921 137 306 396 581 032 187 500.	1 800
9	-8 720 191 854 362 512 421 288 015 625.	-3 990
11	12 667 226 062 126 596 990 923 643 750.	5 796
13	-12 391 851 582 515 149 230 251 390 625.	-5 670
15	8 130 103 683 766 552 934 133 187 500.	3 720
17	-3 442 180 995 143 097 008 403 164 062.5	-1 575
19	852 349 579 749 719 259 223 640 625.	390
21	-93 977 004 946 763 918 324 657 812.5	-43

P^{19}_{23} Numerator 13 113 070 457 687 988 603 440 625
Denominator 8

k	a_k	b_k
0	1 639 133 807 210 998 575 430 078.125	1
2	-155 717 711 685 044 864 665 857 421.875	-95
4	2 384 939 689 492 002 927 250 763 671.875	1 455
6	-14 727 617 257 790 822 200 239 251 953.125	-8 985
8	50 108 320 486 440 226 450 897 488 281.25	30 570
10	-106 776 454 469 338 869 200 666 149 218.75	-65 142
12	151 111 745 686 781 958 668 898 902 343.75	92 190
14	-145 112 515 952 389 703 882 824 816 406.25	-88 530
16	93 897 780 146 082 053 393 512 025 390.625	57 285
18	-39 331 015 704 027 910 817 444 724 609.375	-23 995
20	9 656 137 258 279 992 607 858 590 234.375	5 891
22	-1 057 241 305 651 094 081 152 400 390.625	-645

P^{19}_{24} Numerator 563 862 029 680 583 509 947 946 875
Denominator 8

k	a_k	b_k
1	70 482 753 710 072 938 743 493 359.375	1
3	-2 748 827 394 692 844 610 996 241 015.625	-39
5	31 505 790 908 402 603 618 341 531 640.625	447
7	-171 484 539 776 607 459 962 919 343 359.375	-2 433
9	544 267 824 149 183 232 977 255 721 093.75	7 722
11	-1 110 103 370 933 648 785 210 020 410 156.25	-15 750
13	1 524 541 962 748 877 665 021 761 363 281.25	21 630
15	-1 432 350 520 896 102 261 145 272 049 218.75	-20 322
17	911 553 453 732 373 316 769 599 616 796.875	12 933
19	-376 871 284 087 760 003 461 458 992 578.125	-5 347
21	91 557 097 069 384 747 427 797 873 828.125	1 299
23	-9 938 068 273 120 284 362 832 563 671.875	-141

P^{19}_{25} Numerator 187 954 009 893 527 836 649 315 625
Denominator 16

k	a_k	b_k
0	-11 747 125 618 345 489 790 582 226.5625	-1
2	1 691 586 089 041 750 529 843 840 625.	144
4	-39 540 824 831 350 918 635 099 774 609.375	-3 366
6	362 845 216 099 455 488 651 503 814 062.5	30 888
8	-1 759 566 704 995 115 879 261 939 970 117.1875	-149 787
10	5 210 085 154 248 591 631 919 029 125 000.	443 520
12	-10 148 811 706 713 402 449 675 608 816 406.25	-863 940
14	13 490 399 060 107 960 475 504 628 984 375.	1 148 400
16	-12 370 463 345 031 756 515 339 891 250 585.9375	-1 053 063
18	7 726 225 484 693 248 781 143 417 396 875.	657 712
20	-3 146 984 470 401 046 641 958 235 002 734.375	-267 894
22	755 293 188 757 141 611 575 274 839 062.5	64 296
24	-81 160 890 897 148 988 963 132 603 320.3125	-6 909

TABLE 1 (Continued)

P_{20}^{20} Numerator 319 830 986 772 877 770 815 625
Denominator 1

k	a_k	b_k
0	319 830 986 772 877 770 815 625.	1
2	-3 198 309 867 728 777 708 156 250.	-10
4	14 392 394 404 779 499 686 703 125.	45
6	-38 379 718 412 745 332 497 875 000.	-120
8	67 164 507 222 304 331 871 281 250.	210
10	-80 597 408 666 765 198 245 537 500.	-252
12	67 164 507 222 304 331 871 281 250.	210
14	-38 379 718 412 745 332 497 875 000.	-120
16	14 392 394 404 779 499 686 703 125.	45
18	-3 198 309 867 728 777 708 156 250.	-10
20	319 830 986 772 877 770 815 625.	1

P_{21}^{20} Numerator 13 113 070 457 687 988 603 440 625
Denominator 1

k	a_k	b_k
1	13 113 070 457 687 988 603 440 625.	1
3	-131 130 704 576 879 886 034 406 250.	-10
5	590 088 170 595 959 487 154 828 125.	45
7	-1 573 568 454 922 558 632 412 875 000.	-120
9	2 753 744 796 114 477 606 722 531 250.	210
11	-3 304 493 755 337 373 128 067 037 500.	-252
13	2 753 744 796 114 477 606 722 531 250.	210
15	-1 573 568 454 922 558 632 412 875 000.	-120
17	590 088 170 595 959 487 154 828 125.	45
19	-131 130 704 576 879 886 034 406 250.	-10
21	13 113 070 457 687 988 603 440 625.	1

P_{22}^{20} Numerator 13 113 070 457 687 988 603 440 625
Denominator 2

k	a_k	b_k
0	-6 556 535 228 843 994 301 720 312.5	-1
2	347 496 367 128 731 697 991 176 562.5	53
4	-3 114 354 233 700 897 293 317 148 437.5	-475
6	13 473 679 895 274 408 290 035 242 187.5	2 055
8	-35 208 594 178 892 249 400 238 078 125.	-5 370
10	60 857 759 994 129 955 108 567 940 625.	9 282
12	-72 423 488 137 810 761 056 802 571 875.	-11 046
14	59 992 297 343 922 547 860 740 859 375.	9 150
16	-34 126 765 866 132 990 340 454 226 562.5	-5 205
18	12 752 461 020 101 568 916 846 007 812.5	1 945
20	-2 825 866 683 631 761 544 041 454 687.5	-431
22	281 931 014 840 291 754 973 973 437.5	43

P_{23}^{20} Numerator 563 862 029 680 583 509 947 946 875
Denominator 2

k	a_k	b_k
1	-281 931 014 840 291 754 973 973 437.5	-1
3	7 048 275 371 007 293 874 349 335 937.5	25
5	-54 976 547 893 856 892 219 924 820 312.5	-195
7	224 135 156 798 031 945 204 308 882 812.5	795
9	-566 681 339 828 986 427 497 686 609 375.	-2 010
11	959 129 312 486 672 550 421 457 634 375.	3 402
13	-1 124 904 749 212 764 102 346 154 015 625.	-3 990
15	921 914 418 527 754 038 764 893 140 625.	3 270
17	-520 162 722 380 338 287 926 980 992 187.5	-1 845
19	193 122 745 165 599 852 157 171 804 687.5	685
21	-42 571 583 240 884 055 001 069 989 062.5	-151
23	4 228 965 222 604 376 324 609 601 562.5	15

P_{24}^{20} Numerator 862 029 680 583 509 947 946 875
Denominator 8

k	a_k	b_k
0	70 482 753 710 072 938 743 493 359.375	1
2	-7 048 275 371 007 293 874 349 335 937.5	-100
4	116 296 543 621 620 348 926 764 042 968.75	1 650
6	-790 816 496 627 018 372 701 995 492 187.5	-11 220
8	3 012 000 479 799 967 037 203 188 712 890.625	42 735
10	-7 312 726 662 927 487 540 514 923 021 875.	-103 752
12	12 048 321 919 199 868 148 812 754 851 562.5	170 940
14	-13 862 547 999 697 145 592 070 273 921 875.	-196 680
16	11 199 357 150 762 039 601 647 377 337 890.625	158 895
18	-6 249 000 943 935 066 748 998 121 242 187.5	-88 660
20	2 299 570 322 544 839 699 445 214 342 968.75	32 626
22	-503 246 861 489 920 782 628 542 585 937.5	-7 140
24	49 690 341 365 601 421 814 162 818 359.375	705

P_{25}^{20} Numerator 1 691 586 089 041 750 529 843 840 625
Denominator 8

k	a_k	b_k
1	3 171 723 916 953 282 243 457 201 171.875	15
3	-131 097 921 900 735 666 062 897 648 437.5	-620
5	1 623 499 748 957 820 071 017 626 039 843.75	7 678
7	-9 722 391 046 767 461 170 277 473 992 187.5	-45 980
9	34 505 184 492 534 757 526 570 891 548 828.125	163 185
11	-80 105 059 246 572 096 340 755 072 796 875.	-378 840
13	127 972 716 601 231 031 959 011 152 882 812.5	605 220
15	-143 965 817 280 076 262 343 419 744 071 875.	-680 856
17	114 331 132 034 414 965 029 901 730 642 578.125	540 705
19	-62 939 689 408 020 932 839 164 700 054 687.5	-297 660
21	22 910 419 093 459 208 738 572 516 464 843.75	108 350
23	-4 969 034 136 560 142 181 416 281 835 937.5	-23 500
25	486 965 345 382 893 933 778 795 619 921.875	2 303

TABLE 1 (Continued)

P^{21}_{21} Numerator 13 113 070 457 687 988 603 440 625
Denominator 1

k	a_k	b_k
0	13 113 070 457 687 988 603 440 625.	1
2	-131 130 704 576 879 886 034 406 250.	-10
4	590 088 170 595 959 487 154 828 125.	45
6	-1 573 568 454 922 558 632 412 875 000.	-120
8	2 753 744 796 114 477 606 722 531 250.	210
10	-3 304 493 755 337 373 128 067 037 500.	-252
12	2 753 744 796 114 477 606 722 531 250.	210
14	-1 573 568 454 922 558 632 412 875 000.	-120
16	590 088 170 595 959 487 154 828 125.	45
18	-131 130 704 576 879 886 034 406 250.	-10
20	13 113 070 457 687 988 603 440 625.	1

P^{21}_{22} Numerator 563 862 029 680 583 509 947 946 875
Denominator 1

k	a_k	b_k
1	563 862 029 680 583 509 947 946 875.	1
3	-5 638 620 296 805 835 099 479 468 750.	-10
5	25 373 791 335 626 257 947 657 609 375.	45
7	-67 663 443 561 670 021 193 753 625 000.	-120
9	118 411 026 232 922 537 089 068 843 750.	210
11	-142 093 231 479 507 044 506 882 612 500.	-252
13	118 411 026 232 922 537 089 068 843 750.	210
15	-67 663 443 561 670 021 193 753 625 000.	-120
17	25 373 791 335 626 257 947 657 609 375.	45
19	-5 638 620 296 805 835 099 479 468 750.	-10
21	563 862 029 680 583 509 947 946 875.	1

P^{21}_{23} Numerator 563 862 029 680 583 509 947 946 875
Denominator 2

k	a_k	b_k
0	-281 931 014 840 291 754 973 973 437.5	-1
2	15 506 205 816 216 046 523 568 539 062.5	55
4	-139 555 852 345 944 418 712 116 851 562.5	-495
6	604 742 026 832 425 814 419 173 023 437.5	2 145
8	-1 581 632 993 254 036 745 403 990 984 375.	-5 610
10	2 735 294 705 980 510 606 757 490 290 625.	9 702
12	-3 256 303 221 405 369 769 949 393 203 125.	-11 550
14	2 698 079 812 021 592 095 100 925 796 875.	9 570
16	-1 535 114 375 805 388 605 833 285 367 187.5	-5 445
18	573 729 615 199 993 721 372 035 945 312.5	2 035
20	-127 150 887 692 971 581 493 262 020 312.5	-451
22	12 686 895 667 813 128 973 828 804 687.5	45

P^{21}_{24} Numerator 8 457 930 445 208 752 649 219 203 125
Denominator 2

k	a_k	b_k
1	-12 686 895 667 813 128 973 828 804 687.5	-3
3	325 630 322 140 536 976 994 939 320 312.5	77
5	-2 598 523 959 675 647 676 388 808 945 312.5	-605
7	10 466 688 925 945 831 403 408 763 867 187.5	2 475
9	-26 515 611 945 729 439 555 302 201 796 875.	-6 270
11	44 936 984 455 394 102 825 301 626 203 125.	10 626
13	-52 752 112 186 766 990 273 180 169 890 625.	-12 474
15	43 262 314 227 242 769 800 756 223 634 375.	10 230
17	-24 422 274 160 540 273 274 620 449 023 437.5	-5 775
19	9 071 130 402 486 387 216 287 595 351 562.5	2 145
21	-2 000 300 550 291 870 001 540 341 539 062.5	-473
23	198 761 365 462 405 687 256 651 273 437.5	47

P^{21}_{25} Numerator 8 457 930 445 208 752 649 219 203 125
Denominator 8

k	a_k	b_k
0	3 171 723 916 953 282 243 457 201 171.875	3
2	-323 859 287 363 141 353 319 548 921 875.	-312
4	5 558 974 785 113 452 678 699 321 253 906.25	5 258
6	-38 145 266 307 891 474 447 978 506 093 750.	-36 080
8	146 010 310 516 944 348 077 552 255 947 265.625	138 105
10	-355 588 311 777 466 378 878 473 737 781 250.	-336 336
12	587 111 470 819 388 169 521 875 594 523 437.5	555 324
14	-676 566 772 173 138 541 416 342 496 375 000.	-639 936
16	547 233 386 011 534 551 874 888 204 169 453.125	517 605
18	-305 627 316 637 618 276 979 535 904 921 875.	-289 080
20	112 551 794 917 004 173 691 322 240 785 156.25	106 458
22	-24 646 409 317 338 305 219 824 757 906 250.	-23 312
24	2 434 826 726 914 469 668 893 978 099 609.375	2 303

TABLE 1 (Continued)

P^{22}_{22} Numerator 563 862 029 680 583 509 947 946 875
Denominator 1

k	a_k	b_k
0	563 862 029 680 583 509 947 946 875.	1
2	-6 202 482 326 486 418 609 427 415 625.	-11
4	31 012 411 632 432 093 047 137 078 125.	55
6	-93 037 234 897 296 279 141 411 234 375.	-165
8	186 074 469 794 592 558 282 822 468 750.	330
10	-260 504 257 712 429 581 595 951 456 250.	-462
12	260 504 257 712 429 581 595 951 456 250.	462
14	-186 074 469 794 592 558 282 822 468 750.	-330
16	93 037 234 897 296 279 141 411 234 375.	165
18	-31 012 411 632 432 093 047 137 078 125.	-55
20	6 202 482 326 486 418 609 427 415 625.	11
22	-563 862 029 680 583 509 947 946 875.	-1

P^{22}_{23} Numerator 25 373 791 335 626 257 947 657 609 375
Denominator 1

k	a_k	b_k
1	25 373 791 335 626 257 947 657 609 375.	1
3	-279 111 704 691 888 837 424 233 703 125.	-11
5	1 395 558 523 459 444 187 121 168 515 625.	55
7	-4 186 675 570 378 332 561 363 505 546 875.	-165
9	8 373 351 140 756 665 122 727 011 093 750.	330
11	-11 722 691 597 059 331 171 817 815 531 250.	-462
13	11 722 691 597 059 331 171 817 815 531 250.	462
15	-8 373 351 140 756 665 122 727 011 093 750.	-330
17	4 186 675 570 378 332 561 363 505 546 875.	165
19	-1 395 558 523 459 444 187 121 168 515 625.	-55
21	279 111 704 691 888 837 424 233 703 125.	11
23	-25 373 791 335 626 257 947 657 609 375.	-1

P^{22}_{24} Numerator 25 373 791 335 626 257 947 657 609 375
Denominator 2

k	a_k	b_k
0	-12 686 895 667 813 128 973 828 804 687.5	-1
2	735 839 948 733 161 480 482 070 671 875.	58
4	-7 256 904 321 989 109 773 030 076 281 250.	-572
6	34 888 963 086 486 104 678 029 212 890 625.	2 750
8	-102 573 551 474 269 147 753 405 885 898 437.5	-8 085
10	202 635 097 606 311 295 969 993 668 468 750.	15 972
12	-281 344 598 329 423 948 123 627 572 750 000.	-22 176
14	279 669 928 101 272 615 099 082 170 531 250.	22 044
16	-198 867 089 592 970 796 664 766 513 476 562.5	-15 675
18	99 084 655 165 620 537 285 602 964 609 375.	7 810
20	-32 935 181 153 642 882 816 059 576 968 750.	-2 596
22	6 571 811 955 927 200 808 443 320 828 125.	518
24	-596 284 096 387 217 061 769 953 820 312.5	-47

P^{22}_{25} Numerator 397 522 730 924 811 374 513 302 546 875
Denominator 2

k	a_k	b_k
1	-596 284 096 387 217 061 769 953 820 312.5	-3
3	16 298 431 967 917 266 355 045 404 421 875.	82
5	-139 928 001 285 533 603 828 682 496 500 000.	-704
7	634 048 755 825 074 142 348 717 562 265 625.	3 190
9	-1 803 759 391 571 331 611 854 110 306 445 312.5	-9 075
11	3 489 454 532 057 994 245 477 769 756 468 750.	17 556
13	-4 775 043 043 868 834 230 653 790 193 062 500.	-24 024
15	4 696 333 543 145 721 578 500 156 288 781 250.	23 628
17	-3 312 358 155 430 990 778 132 093 471 835 937.5	-16 665
19	1 639 781 265 064 846 919 867 373 005 859 375.	8 250
21	-542 221 004 981 442 714 836 144 673 937 500.	-2 728
23	107 728 660 080 623 882 493 104 990 203 125.	542
25	-9 739 306 907 657 878 675 575 912 398 437.5	-49

TABLE 1 (Concluded)

P^{23}_{23} Numerator 25 373 791 335 626 257 947 657 609 375
Denominator 1

k	a_k	b_k
0	25 373 791 335 626 257 947 657 609 375.	1
2	-279 111 704 691 888 837 424 233 703 125.	-11
4	1 395 558 523 459 444 187 121 168 515 625.	55
6	-4 186 675 570 378 332 561 363 505 546 875.	-165
8	8 373 351 140 756 665 122 727 011 093 750.	330
10	-11 722 691 597 059 331 171 817 815 531 250.	-462
12	11 722 691 597 059 331 171 817 815 531 250.	462
14	-8 373 351 140 756 665 122 727 011 093 750.	-330
16	4 186 675 570 378 332 561 363 505 546 875.	165
18	-1 395 558 523 459 444 187 121 168 515 625.	-55
20	279 111 704 691 888 837 424 233 703 125.	11
22	-25 373 791 335 626 257 947 657 609 375.	-1

P^{23}_{24} Numerator 1 192 568 192 774 434 123 539 907 640 625
Denominator 1

k	a_k	b_k
1	1 192 568 192 774 434 123 539 907 640 625.	1
3	-13 118 250 120 518 775 358 938 984 046 875.	-11
5	65 591 250 602 593 876 794 694 920 234 375.	55
7	-196 773 751 807 781 630 384 084 760 703 125.	-165
9	393 547 503 615 563 260 768 169 521 406 250.	330
11	-550 966 505 061 788 565 075 437 329 968 750.	-462
13	550 966 505 061 788 565 075 437 329 968 750.	462
15	-393 547 503 615 563 260 768 169 521 406 250.	-330
17	196 773 751 807 781 630 384 084 760 703 125.	165
19	-65 591 250 602 593 876 794 694 920 234 375.	-55
21	13 118 250 120 518 775 358 938 984 046 875.	11
23	-1 192 568 192 774 434 123 539 907 640 625.	-1

P^{23}_{25} Numerator 1 192 568 192 774 434 123 539 907 640 625
Denominator 2

k	a_k	b_k
0	-596 284 096 387 217 061 769 953 820 312.5	-1
2	35 777 045 783 233 023 706 197 229 218 750.	60
4	-354 192 753 254 006 934 691 352 569 265 625.	-594
6	1 705 372 515 667 440 796 662 067 926 093 750.	2 860
8	-5 017 730 671 098 431 574 734 161 397 929 687.5	-8 415
10	9 917 397 091 112 194 171 357 871 939 437 500.	16 632
12	-13 774 162 626 544 714 126 885 933 249 218 750.	-23 100
14	13 695 453 125 821 601 474 732 299 344 937 500.	22 968
16	-9 740 300 714 465 190 704 012 195 654 804 687.5	-16 335
18	4 863 752 544 591 946 882 807 424 097 343 750.	8 140
20	-1 613 544 764 823 609 369 149 495 037 765 625.	-2 706
22	321 993 412 049 097 213 355 775 062 968 750.	540
24	-29 217 920 722 973 636 026 727 737 195 312.5	-49

P^{24}_{24} Numerator 1 192 568 192 774 434 123 539 907 640 625
Denominator 1

k	a_k	b_k
0	1 192 568 192 774 434 123 539 907 640 625.	1
2	-14 310 818 313 293 209 482 478 891 687 500.	-12
4	78 709 500 723 112 652 153 633 904 281 250.	66
6	-262 365 002 410 375 507 178 779 680 937 500.	-220
8	590 321 255 423 344 891 152 254 282 109 375.	495
10	-944 514 008 677 351 825 843 606 851 375 000.	-792
12	1 101 933 010 123 577 130 150 874 659 937 500.	924
14	-944 514 008 677 351 825 843 606 851 375 000.	-792
16	590 321 255 423 344 891 152 254 282 109 375.	495
18	-262 365 002 410 375 507 178 779 680 937 500.	-220
20	78 709 500 723 112 652 153 633 904 281 250.	66
22	-14 310 818 313 293 209 482 478 891 687 500.	-12
24	1 192 568 192 774 434 123 539 907 640 625.	1

P^{24}_{25} Numerator 58 435 841 445 947 272 053 455 474 390 625
Denominator 1

k	a_k	b_k
1	58 435 841 445 947 272 053 455 474 390 625.	1
3	-701 230 097 351 367 264 641 465 692 687 500.	-12
5	3 856 765 535 432 519 955 528 061 309 781 250.	66
7	-12 855 885 118 108 399 851 760 204 365 937 500.	-220
9	28 925 741 515 743 899 666 460 459 823 359 375.	495
11	-46 281 186 425 190 239 466 336 735 717 375 000.	-792
13	53 994 717 496 055 279 377 392 858 336 937 500.	924
15	-46 281 186 425 190 239 466 336 735 717 375 000.	-792
17	28 925 741 515 743 899 666 460 459 823 359 375.	495
19	-12 855 885 118 108 399 851 760 204 365 937 500.	-220
21	3 856 765 535 432 519 955 528 061 309 781 250.	66
23	-701 230 097 351 367 264 641 465 692 687 500.	-12
25	58 435 841 445 947 272 053 455 474 390 625.	1

P^{25}_{25} Numerator 58 435 841 445 947 272 053 455 474 390 625
Denominator 1

k	a_k	b_k
0	58 435 841 445 947 272 053 455 474 390 625.	1
2	-701 230 097 351 367 264 641 465 692 687 500.	-12
4	3 856 765 535 432 519 955 528 061 309 781 250.	66
6	-12 855 885 118 108 399 851 760 204 365 937 500.	-220
8	28 925 741 515 743 899 666 460 459 823 359 375.	495
10	-46 281 186 425 190 239 466 336 735 717 375 000.	-792
12	53 994 717 496 055 279 377 392 858 336 937 500.	924
14	-46 281 186 425 190 239 466 336 735 717 375 000.	-792
16	28 925 741 515 743 899 666 460 459 823 359 375.	495
18	-12 855 885 118 108 399 851 760 204 365 937 500.	-220
20	3 856 765 535 432 519 955 528 061 309 781 250.	66
22	-701 230 097 351 367 264 641 465 692 687 500.	-12
24	58 435 841 445 947 272 053 455 474 390 625.	1

TABLE 2. CROSS-REFERENCED ZEROES

$P_n^0(\cos\theta) = 0 \qquad n = 1,\ldots 25$

1		2		3		4		5	
00000	90.000	57735	54 736°	77460	39.232°	.86114	30.556°	.90618	25.017°
				.00000	90.000°	.33998	70.124°	53847	57.421°
								.00000	90.000°

6		7		8		9		10	
93247	21 177	94911	18.358	96029	16.201°	96816	14.497°	97391	13.118°
66121	46.608	.74153	42 138°	79667	37 187°	83603	33.277	86506	30.110°
23862	76 195	.40585	66.056	52553	58.296°	.61337	52 166°	.67941	47 202
		00000	90 000	18343	79.430	32425	71.080°	43340	64.317°
						.00000	90 000°	14887	81 438°

11		12		13		14		15	
.97423	11 975	98156	11.020°	.98419	10 204°	.98628	9.501°	.98799	8.888°
88706	27.494	.90412	25.295	91760	23.423°	.92843	21.808°	.93727	20 401°
.73015	43 101	76990	39.655	.80158	36.719	.82720	34 188°	.84821	31.983
51910	58.728	.56730	54.033	.64235	50 033	.68729	46.584°	.72442	43 580°
26954	74 363	36783	68 418°	44849	63.353°	.51525	58.986°	57097	55.182°
00000	90 000	12523	82.806°	23046	76.676°	.31911	71 391	39415	66 787°
				.00000	90.000	.10805	83.797°	.20119	78 393°
								00000	90.000°

16		17		18		19		20	
98940	9.349	99058	7.870°	.99157	7.437	99241	7 065	.99313	6 721°
94456	19 165	95068	18 071°	.95582	17 094	96021	16.218	.96397	15 427°
86563	30 045°	88024	28 329	89260	26.798	.90316	25.424°	91223	24.184°
.75540	40 939	79151	38 601°	.80370	36.515	.82271	34.643°	.83912	32.953
.61788	51 839	65767	48 877	69169	46 236	.72097	43.866°	.74633	41 726
45822	62 741	51269	59 157	.55977	55.960°	.60055	53.091	.63605	50.502°
28160	73 644	35123	69 437	41175	65 685	46457	62 318°	51087	59 278°
09501	84 548	17848	79 719	25189	75.411°	31656	71 545°	.37371	68.056°
		00000	90 000°	08478	85 137°	.16036	80.772	22779	76 833°
						.00000	90 000°	07653	85 611

21		22		23		24		25	
99375	6 409	99429	6.123°	99477	5.863°	99519	5.624°	99556	5 403
96723	14 709	97006	14.056	97254	13.458	97473	12 908°	97666	12.402
92010	23 059	92696	22 035	93297	21.097	.93827	20 236°	.94297	19 443°
85336	31.421	86581	30 024	.87675	28 747	.88642	27.574	.89499	26.493
76844	39 746	78742	38 018	.80489	36 401	82000	34 916	.83344	33.546°
66714	48 153	69449	46 614°	71866	44 056	74012	42 259°	75926	40 601°
55162	56 520	58764	54 010	61961	51 712	64809	49 602	67357	47 657
42434	64 891	46916	62 008	50950	59 369°	54542	56 947	.57766	54 714
28692	73 265	34[illegible]	70 005	.39030	67 027	43379	64 291	47300	61.771°
.14556	81 637	22[illegible]	78 003	.26414	74.684	31504	71 637	36117	68 828
00000	90 000	09924	86 001	.13326	82 342	19112	78.982	24387	75 885
				00000	90 000°	06406	86 327	12286	82.943
								00000	90 000

$P_n^1(\cos\theta) = 0 \qquad n = 2,\ldots 25$

2		3		4		5	
.00000	90.000°	.44721	63.435°	.65465	49.107°	.76506	40.088°
				.00000	90.000°	.28523	73.427°

6		7		8		9		10	
.83022	33.878°	.87174	29.339°	.89976	25.874°	.91953	23.142°	.93400	20.933°
.46885	62.040°	.59170	53.722°	.67719	47.376°	.73877	42.373°	.78448	38.327°
.00000	90.000°	.20930	77.919°	.36312	68.708°	.47792	61.450°	.56524	55.581°
				.00000	90.000°	.16528	80.487°	.29576	72.797°
								.00000	90.000°

11		12		13		14		15	
.94490	19.109°	95331	17 577°	.95994	16.273°	.96525	15.150°	.96957	14.171°
.81928	34.987°	.84635	32.183°	.86780	29.796°	.88508	27.738°	.89920	25.947°
.63288	50.737°	.68619	46.671°	.72887	43.208°	.76352	40.225°	.79201	37.626°
.39953	66.451°	.48291	61.124°	.55064	56.589°	.60625	52.681°	.65239	49.278°
13655	82.152°	.24929	75.565°	.34272	69.957°	.42064	65.125°	.48606	60.918°
		.00000	90.000°	.11633	83.320°	.21535	77.564°	.29983	72.553°
						00000	90.000°	.10133	84.184°

16		17		18		19		20	
.97313	13.312°	.97611	12.550°	.97861	11.871°	.98074	11.262°	.98257	10.712°
.91088	24.373°	.92065	22.979°	.92890	21.736°	.93593	20.620°	.94198	19.614°
.81570	35.344°	.83559	33.322°	.85246	31.520°	.86688	29.902°	.87929	28.443°
69103	46.288°	.72368	43.641°	.75149	41.280°	.77537	39.162°	.79600	37.250
.54139	57.222°	.58850	53.949°	.62891	51.030°	.66378	48.411°	.69405	46.048°
.37217	68.150°	43442	64.252°	.48823	60.776°	.53499	57.657°	.57583	54.842°
.18951	79.076°	.26636	74.552°	.33350	70.518°	.39235	66.899°	.44412	63.633°
00000	90.000°	.08975	84.851°	.16919	80.260°	23955	76.140°	.30199	72.423°
				.00000	90.000°	.08055	85.380°	.15279	81.212°
								.00000	90.000°

21		22		23		24		25	
.98415	10 214°	.98553	9.760°	.98673	9.344°	.	8.963°	.98873	8.611°
.94720	18.701°	.95176	17.869°	95575	17.109°	.	16.410°	.96238	15.766°
.89006	27.119°	.89946	25.913°	.90771	24.810°	.	23.797°	.92144	22.863°
81395	35.516°	.82965	33.937°	.84346	32.492°	.	31.165°	.86652	29.943°
.72049	43.905°	.74370	41.953°	.76417	40 167°		38.527°	.79848	37.015°
.61167	52.290°	.64326	49.964°	.67[illegible]4	47 837°		45.884°	.71833	44 084°
.48981	60.672°	.53031	57 973°	.56633	55.505°	.	53.239°	.62729	51.150°
.35752	69.052°	.40704	65.981°	.45132	63.172°	.	60.592°	.52674	58 215°
.21761	77.432°	27584	73.988°	.32825	70.838°	.	67.945°	.41820	65.279°
.07305	85.811°	.13928	81.994°	.19932	78.503°	.	75.297°	.30333	72.342°
		.00000	90.000°	.06684	86.168°	.	82.648°	.18386	79.406°
							90.000°	.06160	86.469°

TABLE 2 (Continued)

$P_n^2(\cos \alpha) = 0 \qquad n = 3,\ldots 25$

3		4		5	
.00000	90.000°	.37796	67.792°	.57735	54.736°
				.00000	90.000°

6		7		8		9		10	
.69475	45.993	.76946	39.695°	.81985	34.931°	.85540	31.196°	.88141	28.187°
.25556	75.489	.42091	65.108°	.54060	57.275°	.62738	51.143°	.69206	46.207°
		.00000	90.000°	.18868	79.124°	.33163	70.632°	.44143	63.805
						.00000	90.000°	.15163	81.279°

11		12		13		14		15	
.90100	25.711°	.91611	23.636	.92802	21.872	.93756	20.354°	.94533	19.034°
.74145	42.145	.77997	38.742	.81055	35.851	.83521	33.362	.85539	31.197°
.52713	58.190	.59496	53.490	.64951	49.496	.69392	46.059	.73052	43.070°
.27369	74.116	.37261	68.123	.45348	63.033°	.52021	58.654	.57578	54.846°
.00000	90.000	.12686	82.712°	.23302	76.525°	.32218	71.205	.39747	66.580
				.00000	90.000°	.10909	83.737	.20289	78.294°
								.00000	90.000°

16		17		18		19		20	
.95173	17.975	.95707	16.849	.96158	15.935	.96541	15.115°	.96869	14.375°
.87009	29.297	.88608	27.616°	.89790	26.117	.90797	24.773	.91664	23.561
.76122	40.446	.79667	38.124	.80845	36.055°	.82708	34.209	.84315	32.526
.62246	51.504	.66201	48.547	.69576	45.912	.72479	43.549	.74991	41.417
.46141	62.522°	.51607	58.931	.56307	55.732	.60373	52.863	.63910	50.275
.28369	73.519	.35354	69.296°	.41417	65.533	.46773	62.159	.51331	59.115
.09576	84.507	.17966	79.650°	.25337	75.323	.31824	1.444	.37549	67.945°
		.00000	90.000°	.08527	85.108°	.16121	80.723°	.22898	76.769
						.00000	90.000	.07689	85.590°

21		22		23		24		25	
.97153	13.705	.97400	13.094	.97616	12.536	.97806	12.023	.97975	11.550
.92413	22.462	.93367	21.461	.93639	20.546	.94144	19.705	.94591	18.931°
.85723	31.019	.86326	29.627	.87995	28.363°	.88939	27.203	.89777	26.134
.77129	39.485	.79095	37.726	.80782	36.116	.82275	34.639	.83602	33.278
.67004	47.930°	.69725	45.793	.72128	43.840	.74260	42.046°	.76161	40.394
.55400	56.357	.58997	53.945	.62186	51.548°	.65026	49.439	.67565	47.496°
.42619	64.774	.47122	61.887	.51136	59.246	.54725	56.822	.57945	54.588°
.28927	73.186	.34329	69.922	.39172	66.938	.43524	64.199	.47446	61.676
.14619	81.594	.20869	77.955	.26510	74.627°	.31610	71.573	.36229	68.759°
.03105	90.000	.07092	85.985	.13374	82.314	.19176	79.945	.24462	75.841
				.00000	90.000°	.06427	86.315	.12324	82.921
								.00000	90.000°

$P_n^3(\cos \alpha) = 0 \qquad n = 4,\ldots 25$

4		5	
.00000	90.000°	.33333	70.529°

6		7		8		9		10	
.52223	58.518°	.64064	50.160°	.71988	43.955°	.77554	39.146°	.81612	35.302°
.00000	90.000°	.22609	76.933°	.38527	67.339°	.50091	59.940°	.58726	54.037°
				.00000	90.000°	.17316	80.029°	.30716	72.112°
								.00000	90.000°

11		12		13		14		15	
.84661	32.155°	.87011	29.528°	.88860	27.302°	.90340	25.391°	.91544	23.731°
.65327	49.211°	.70480	45.187°	.74574	41.777	.77878	38.851°	.80583	36.310°
.41227	65.653°	.49586	60.274°	.56324	55.720°	.61823	51.813°	.66364	48.422°
.14089	81.901°	.25594	75.171°	.35053	69.480°	.42891	64.602°	.49440	60.370°
		.00000	90.000°	.11898	83.167°	.21958	77.316°	.30496	72.244°
						.00000	90.000°	.10306	84.085°

16		17		18		19		20	
.92537	22.276°	.93364	20.990°	.94061	19.846°	.94654	18.820°	.95162	17.895°
.82823	34.083°	.84698	32.115°	.86284	30.363°	.87636	28.793°	.88799	27.378°
.70152	45.451°	.73343	42.826°	.76054	40.488°	.78375	38.394°	.80378	36.507°
.54956	56.663°	.59639	53.388°	.63644	50.473°	.67092	47.862°	.70080	45.509°
.37778	67.804°	.44022	63.882°	.49406	60.392°	.54073	57.267°	.58141	54.450°
.19236	78.909°	.26992	74.341°	.33748	70.277°	.39655	66.637°	.44841	63.358°
.00000	90.000	.09095	84.782°	.17120	80.142°	.24211	75.989°	.30491	72.247°
				.00000	90.000°	.08141	85.331°	.15426	81.126°
								.00000	90.000°

21		22		23		24		25	
.95601	17.057°	.95983	16.294°	.96318	15.597°	.96612	14.957°	.96872	14.368°
.89806	26.096°	.90683	24.929°	.91452	23.862°	.92130	22.884°	.92730	21.982°
.82117	34.797°	.83637	33.241°	.84972	31.819°	.86151	30.513°	.87198	29.311°
.72685	43.377°	.74968	41.437°	.76981	39.663°	.78763	38.036°	.80347	36.537°
.61705	51.899°	.64843	49.577°	.67618	47.454°	.70082	45.507°	.72281	43.713°
.49412	60.388°	.53456	57.686°	.57049	55.216°	.60252	52.949°	.63119	50.862°
.36066	68.859°	.41030	65.776°	.45463	62.959°	.49434	60.374°	.53001	57.994°
.21952	77.319°	.27805	73.856°	.33065	70.692°	.37803	67.788°	.42080	65.115°
.07370	85.774°	.14039	81.930°	.20078	78.417°	.25552	75.195°	.30521	72.229°
		.00000	90.000°	.06733	86.139°	.12882	82.599°	.18500	79.339°
						.00000	90.000°	.06198	86.447°

TABLE 2 (Continued)

$P_n^4(\cos\theta) = 0 \qquad n = 5,\ldots 25$

5	
.00000	90.000°

6		7		8		9		10	
30151	72 452	.48038	61.289	59741	53.316	.67860	47.266°	.73737	42 493°
		00000	90 000	.20762	78.017°	.35741	69.059°	.46890	62.037°
						.00000	90.000°	.16093	80 739°

11		12		13		14		15	
.79132	38 619	.81506	35 407°	.84154	32.697	.86271	30.378°	.87990	28 370°
55431	56 357	.62038	51 656	67308	47.695	71560	44 308°	.75039	41.376°
28743	73 296	38825	67 154	46964	61 989°	.53616	57 577°	.59114	53.762°
00000	90.000	.13215	82.406	.24126	76.039	33198	70.611°	.40798	65.922°
				00000	90.000°	.11240	83.546°	.20823	77.981°
								.00000	90.000°

16		17		18		19		20	
89405	26 614	90583	25.065	91575	23 687	92418	22.454°	93141	21 344°
77920	38 813	80332	36.552°	82371	34 542°	84110	32 744°	85604	31.125°
63705	50 428°	67574	47 488°	.70864	44.875	.73683	42.538°	.76116	40.434°
47213	61 827	.52668	58.219	.57339	55.013	61366	52 145°	.64860	49.564°
29025	73 127°	.36078	68.852°	42173	65 056°	47468	61.661°	.52090	58.607°
09793	84 380°	.18333	79 436	25798	75 050°	.32344	71 129	.38103	67 002°
		.00000	90 000	.08682	85.019	16384	80 570°	.23224	76 571°
						.00000	90.000°	.07802	85 525°

21		22		23		24		25	
93765	20 340	94307	19 426°	94782	18.591°	.95200	17.825°	95569	17 120°
86998	29 659	88026	28 326°	.89014	27.109°	.89886	25.992°	.90657	24.964°
78229	38 529	.20976	36 797	81700	35.215	83134	33.764°	.84407	32.428°
67209	47.228	70582	45 104°	.72939	43.164	.75028	41.385°	.76887	39.748°
56149	55 844	59719	53.331	.62882	51 037	.65695	48.932°	.68205	46 996°
43[illegible]	64 413	47696	61 313°	.51706	58 865	55286	56.437°	58492	54.202
293 4	72 354	34747	69.667	39608	66 667	.43970	63.915	.47894	61.384°
13914	81 441	.21122	77.806	26804	74.452°	.31933	71.378°	36570	68 549
00000	90 000	07087	85 936	13523	82.228	19372	78.830°	24692	75.705°
				.00000	90.000°	06493	86 277°	.12440	82 854°
								00000	90 000°

$P_n^5(\cos\theta) = 0 \qquad n = 6,\ldots 25$

6		7		8		9		10	
.00000	90.000°	.27735	73.898°	.44721	63.435°	56185	55.816°	.64358	49.941°
				.00000	90.000°	.19305	78.869°	.33484	70.437°
								00000	90.000°

11		12		13		14		15	
70414	45.240°	.75035	41.379°	.78645	38 145°	.81521	35.392°	.83851	33.017°
.44236	63.746°	.52586	58 274°	.59201	53.700°	64528	49 813°	.68881	46.464°
.15097	81.317°	.27109	74.271°	.36801	68.407°	44721	63.435°	.51268	59.158°
		.00000	90.000°	.12486	82.827°	.22885	76.770°	.31611	71.572°
						00000	90.000°	.10681	83.869°

16		17		18		19		20	
85765	30 947°	.87356	29.125	.88695	27.508°	.89831	26.064°	.90803	24.765°
.72482	43 546°	.75495	40.979°	.78040	38.703°	.80210	36.669°	.82074	34.841°
.56735	55.434°	.61344	52.161°	.65263	49.260°	.68621	46.669°	.71520	44.340°
.38986	67.054°	.45265	63.086°	.50647	59.571	.55290	56.434°	.59321	53.615°
19848	78.552°	.27749	73.890°	.34590	69.763°	.40542	66.083°	.45744	62.778°
.00000	90 000°	.09349	84.636°	.17546	79.895°	.24751	75.670°	31102	71.879°
				.00000	90 000	.08322	85.227°	.15735	80.947°
								00000	90.000°

21		22		23		24		25	
.91643	23.591°	.92372	22 524°	.93010	21 550	93571	20 658°	94066	19.836°
33688	32 188°	85094	31.686°	86325	30.316°	.87411	29 060°	88373	27.905°
74039	42.236°	76240	40 324°	78175	38.579°	.79884	36 980°	81402	35.510°
.62840	51.068°	65928	48 755	.68653	46.644	71067	44.710°	.73216	42.932°
.50313	59.792	54344	57 082°	.57915	54.609°	.61093	52.344°	.63930	50.260°
.36721	68.456°	41708	65 349°	.46150	62.516°	.50120	59 921°	.53679	57.535°
.22349	77.086°	.28263	73 582°	.33564	70.389°	.38326	67.464°	.42616	64.776°
.07503	85.697°	.14270	81.796°	.20380	78.241°	.25905	74 986°	.30909	71.995°
		00000	90 000°	06834	86.081°	13060	82.496°	18735	79 202°
						.00000	90.000°	.06277	86.401°

TABLE 2 (Continued)

$P_n^6(\cos\theta) = 0 \qquad n = 7,\ldots 25$

7		8		9		10	
00000	90.000°	.25820	75.037°	42008	65.160°	53195	57.863°
				00000	90.000°	.18117	79.562°

11		12		13		14		15	
61342	52.163	.67492	47.552°	.72263	43.728°	.76044	40.497°	.79095	37.726°
.3 608	71.574°	.41988	65.173°	.50163	59.892°	.56721	55.444°	.62066	51.636°
00000	90 000°	.14266	81.798°	.25725	75.093°	.35065	69.473°	.42774	64.676°
				.00000	90.000°	11865	83.186°	.21818	77.398°
								.00000	90.000°

16		17		18		19		20	
81594	35.320	.83667	33 210°	.85407	31.343°	.86882	29.678°	.88143	28.185°
.66479	48 334	.70165	45 440°	73276	42.881°	.75926	40.601°	.78200	38.556°
49206	60 524°	.54624	56.890	.59229	53.680°	.63175	50.821°	66579	48.257°
.30232	72.403	.37398	68.039°	.43542	64.188°	48844	60 762°	.53448	57.691°
.10197	84.147	18998	79.048°	.26628	74 557°	33273	70.565°	.39087	66.991°
		.00000	90.000°	.08961	84.859°	.16852	80.298°	.23821	76 219
						.00000	90.000°	.08002	85.410°

21		22		23		24		25	
89230	26 836	90174	25.612°	.9099R	24.497°	.91723	23.475°	.92364	22.537°
80168	36 709	81881	35.034°	.83381	33.508°	.84703	32.110°	.85873	30.825°
69536	45 944	.72121	43.846°	.74392	41.934°	.76398	40.183°	.78179	38 575°
.57469	54 922	.60999	52 411°	.64114	50.123°	.66875	48.030°	.69333	46.106°
44198	63.770	.48709	60.850°	52709	58.191°	.56268	55.758°	.59449	53 523°
29995	72.546	35481	69 218	.40372	66.189°	.44747	63.419°	48673	60.874°
15158	81 282°	21567	77 545°	.27319	74.146°	.32495	71.038°	.37162	68.184°
00000	90 000	.07236	85 851	13782	82.078	.19712	78.632°	25091	75.469°
				00000	90.000°	.06607	86.212°	.12641	82.738°
								.00000	90.000°

$P_n^7(\cos\theta) = 0 \qquad n = 8,\ldots 25$

8		9		10	
.00000	90 000°	.24254	75.964°	.39736	66.587°
				.00000	90.000°

11		12		13		14		15	
.50635	59.579°	.5871C	54.049°	.64900	49.534	.69767	45.760°	.73671	42.548°
.17125	80.140°	.30017	72.532°	.40052	66.389°	48047	61.284°	.54530	56.955°
		.00000	90.000°	13559	82.207°	.24534	75.798°	.33555	70.394°
						.00000	90.000°	.11329	83.495°

16		17		18		19		20	
76855	39.776°	79489	37.356°	.81693	35.222°	.83557	33.325°	.85149	31.626°
.59865	53.227°	.64310	49.976°	.68054	47.114°	.71238	44.571°	.73968	42.296°
.41062	65.756°	47375	61.722°	.52734	58.174°	.57320	55.026°	.61275	52.211°
.20888	77.943°	.29020	73 130°	.35990	68.906°	.42002	65.164°	.47223	61.821°
.00000	90.000°	.09774	84.391°	.18250	79.485°	.25634	75.147°	.32097	71.278°
				.00000	90.000°	.08617	85.057°	.16235	80.657°
								.00000	90.000°

21		22		23		24		25	
.86518	30.096°	.87706	28.710°	.88743	27.448°	.89653	26.294°	.90457	25.235°
.76327	40 247°	.78379	38.391°	.80175	36.702°	.81756	35.158°	.83156	33.741°
.64709	49 678°	.67708	47.384°	.70343	45.297°	.72670	43 390°	.74735	41.639°
.51781	58.815°	.55782	56.095°	.59313	53.621°	.62442	51.360°	.65229	49.286°
.37780	67.802°	.42799	64 660°	.47250	61.803°	.51214	59.194°	.54756	56.800°
.22990	76.709°	.28998	73.143°	.34358	69.905°	.39157	66.948°	.43465	64.237°
.07717	85.574°	.14640	81.582°	.20861	77 959°	.26464	74.654°	.31522	71.626°
		.00000	90.000°	.06995	85.989°	.13341	82.333°	.19105	78.986°
						.00000	90.000°	.06401	86.330°

TABLE 2 (Continued)

$P_n^8(\cos\theta) = 0 \qquad n = 9,\ldots 25$

9		10	
.00000	90.000°	.22942	76.737°

11		12		13		14		15	
.37796	67.792°	.48412	61.045°	.56387	55.676°	.62580	51.259°	.67505	47.542°
.00000	90.000°	.16279	80.631°	.28644	73.355°	.38362	67.442°	.46179	62.498°
				00000	90.000°	.12948	82.561°	.23495	76.412°
								.00000	90.000°

16		17		18		19		20	
.71497	44.359°	74783	41.597°	.77524	39.173°	.79835	37.027°	.81804	35.111°
.52575	58.282°	57882	54.632°	.62340	51.435°	.66121	48.608°	.69357	46.086°
32225	71.201°	.39541	66.709°	.45736	62.783°	.51028	59.317°	.55586	56.230°
.10860	83.766°	.20068	78.423°	.27944	73.773°	.34730	69.678°	.40617	66.036°
		.00000	90.000°	.09400	84.606°	.17583	79.873°	.24743	75 675°
						.00000	90.000°	.08310	85.233°

21		22		23		24		25	
.83495	33.389°	84959	31.833°	.86235	30.418°	87354	29.127°	.88342	27.943°
.72150	43.822°	74576	41.776°	.76697	39.917°	.78564	38.220°	.80214	36.665°
.59538	53.460°	.62988	50 959°	.66016	48.688°	.68689	46.615°	.71060	44.716°
.45754	62.772°	.50261	59.827°	.54237	57.155°	.57760	54.718°	.60896	52.486°
.31038	71.918	.36596	58.533°	.41527	65.464°	.45916	62.667°	.49840	60.106°
.15681	80.978°	.22240	77.150°	.28095	73.683°	.33337	70.526°	.38046	67.638°
.00000	90.000°	.07461	85.721°	.14172	81.853°	.20220	78.334°	.25695	75.117°
				.00000	90.000°	.06777	86.114°	.12939	82.566°
								.00000	90.000°

$P_n^9(\cos\theta) = 0 \qquad n = 10,\ldots 25$

10	
.00000	90.000°

11		12		13		14		15	
.21822	77.396°	.36116	68.829°	.46457	62.318°	.54319	57.099°	.60489	52.779°
		.00000	90.000°	.15548	81.055°	.27444	74.072°	.36870	68.364°
						.00000	90.000°	.12412	82.870°

16		17		18		19		20	
.65445	49.122°	.69498	45.974°	.72861	43.230°	.75687	40.811°	.78087	38.660°
.44513	63.568°	.50816	59.459°	.56084	55.986°	.60539	52.743°	.64342	49.953°
.22577	76.952°	.31041	71.916°	.38178	67.556°	.44256	63.733°	.49479	60.344°
.00000	90.000°	.10444	84.005°	.19337	78.850°	.26979	74.348°	.33595	70.370°
				.00000	90.000°	.09065	84.799°	.16984	80.221°
								.00000	90.000°

21		22		23		24		25	
.80143	36.734°	.81919	34.996°	.83464	33.421°	.84818	31.986°	.86011	30.671°
.67615	47.456°	.70455	45.206°	.72935	43.168°	.75114	41.310°	.77039	39.611°
.54000	57.316°	.57941	54.591°	.61397	52.123°	.64445	49.876°	.67146	47.820°
.39360	66.821°	.44414	63.631°	.48869	60.746°	.52814	58.120°	.56324	55.720°
.23939	76.149°	.30077	72.496°	.35518	69.195°	.40362	66.196°	.44690	63.455°
.08034	85.392°	.15181	81.268°	.21559	77.550°	.27271	74.174°	.32402	71.094°
		.00000	90.000°	.07228	85.855°	.13746	82.099°	.19636	78.676°
						.00000	90.000°	.06578	86.229°

TABLE 2 (Continued)

$P_n^{10}(\cos\theta) = 0 \qquad n = 11,\ldots,25$

11	12	13	14	15
00000 90.000°	.20851 77.965°	34641 69.732°	.4472 63.435	.52462 58.359
		.00000 90.000°	.14907 81.427	.26383 74.703°
				00000 90.000°

16	17	18	19	20
56693 54.131	63519 59.536°	67653 47.427°	.71174 44.705	73967 42.296°
35540 69.182	.43[illegible]6 64.522	49222 60.513	54444 57.014°	.58885 53.925
11938 83.144°	21760 77.432°	.29980 72.555°	36947 69.317°	.42912 64.588°
	00000 90.000	10073 84.279	.19681 79.233	.26108 71.866°
			.00000 90.000°	.08764 84.972

21	22	23	24	25
76438 40.148°	.79568 38.217°	80417 36.470°	82033 34.882	.83455 33.431°
62697 51.170	65997 48.703	68873 46.471°	.71395 44.442	73621 42.590°
48063 61.274°	.52543 58.303	.56466 55.621°	.59925 53.187°	.62990 50.965°
32564 70.995°	.38214 67.534°	.43187 64.414°	47587 61.584°	.51499 59.004°
16443 80.536°	23209 76.580°	.29201 73.022°	34530 69.800°	.39290 66.865°
.00000 90.000°	07784 85.536°	14725 81.532°	20937 77.914°	26516 74.623°
		.00000 90.000°	.07016 85.977°	13356 82.325°
				.00000 90.000°

$P_n^{11}(\cos\theta) = 0 \qquad n = 12,\ldots 25$

12	13	14	15
00000 90.000	20000 78.463	33333 70.529	43166 64.427
		00000 90.000°	14339 81.756

16	17	18	19	20
50762 59.481	56863 55.345	61825 51.817	65944 48.743°	.69407 46.047°
35437 75.264	34344 69.913	41660 65.380°	47777 61.465	.52939 58.036°
00000 90.000°	11514 83.388	21525 77.863	.29020 73.130°	35828 69.005°
		00000 90.000	.09738 84.411	18088 79.579
				.00000 90.000

21	22	23	24	25
72353 43.653	74883 41.511	.77074 39.580	.76995 37.829	80663 36.232
57359 54.999°	61172 52.286	64487 49.844	67390 47.621	.69946 45.616
41684 65.365	46762 62.120	.51199 59.204	55099 56.565	58547 54.164
25316 75.335	31624 71.565	37163 68.184	42057 65.130	.46471 62.354
8437° 85.129	15951 80.822	22542 76.972°	.28397 73.503	33621 70.354
	00000 90.000	07555 85.667	14309 91.771	20367 78.249
			00000 90.000	06821 86.089

$P_n^{12}(\cos\theta) = 0 \qquad n = 13,\ldots 25$

13	14	15
00000 90.000°	.19245 78.904°	.32163 71.238°
		.00000 90.000°

16	17	18	19	20
.41763 65.315	.49253 60.433°	.55276 56.443	.60224 52.970	64355 49.943°
.13832 82.049°	.24585 75.768°	.33261 70.572°	40426 66.156°	.46440 62.329°
	.00000 90.000°	.11133 83.608°	.20360 78.252°	.28148 73.652°
			.00000 90.000°	.09435 84.586°

21	22	23	24	25
.67849 47.274°	.70836 44.898°	.73414 42.766°	.75656 40.838°	.77620 39.086°
.51553 58.967°	.55945 55.982°	.59752 53.307°	.63076 50.894°	65997 48.702°
.34806 69.631°	40556 66.074°	45562 62.895°	.49952 60.032°	.53826 57.435
17547 79.894°	.24593 75.763°	.30760 72.085°	36195 68.780°	.41011 65.788°
00000 90.000°	.08242 85.272°	.15503 81.083°	.21930 77.332°	.27656 73.945°
		.00000 90.000	.07346 85.787°	.13925 81.996°
				.00000 90.000°

$P_n^{13}(\cos\theta) = 0 \qquad n = 14,\ldots 25$

14	15
00000 90.000°	.18570 79.298°

16	17	18	19	20
31109 71.875°	40488 66.116	47854 61.410	.53815 57.442°	59739 54.028°
00000 90.000°	13375 82.314°	.23814 76.223°	32275 71.171°	.39295 66.862°
	.00000 90.000°	.09787 83.808	19754 78.607°	
			.00000 90.000°	

21	22	23	24	25
62873 51.043	.66388 48.404°	69407 46.047	.72023 43.926°	.74308 42.005°
.45214 63.119°	.55270 59.821	54631 56.886°	.59426 54.249	.61752 51.865°
27349 74.128	33866 70.205°	39614 66.725°	44450 63.609°	48793 60.795°
.09153 84.745	17053 80.181°	23928 76.156	29964 72.564°	.35298 69.330°
	.00000 90.000	09014 85.403	.15085 81.324°	.21365 77.664°
			.00000 90.000°	.07153 85.898°

TABLE 2 (Continued)

$P_n^{14}(\cos\theta) = 0 \qquad n = 15,\ldots 25$

15	16	17	18	19	20	21	22	23	24	25
.00000 90.000°	.17961 79.653°	.30151 72.452°	.39323 66.844°	.46568 62.246°	.52462 58.357°	.57358 55.000°	.61488 52.057°	.65015 49.447°	.68058 47.111°	.70705 45.005°
		.00000 90.000°	.12960 82.553°	.23111 76.637°	.31372 71.716°	.38254 67.509°	.44081 63.844°	.49078 60.608°	.53405 57.720°	.57184 55.121°
				.00000 90.000°	.10471 83.990°	.19200 78.930°	.26616 74.564°	.32999 70.732°	.38550 67.325°	.43416 64.268°
						.00000 90.000°	.08905 84.891°	.16598 80.446°	.23314 76.518°	.29226 73.007°
								.00000 90.000°	.07804 85.524°	.14702 81.546°
										.00000 90.000°

$P_n^{15}(\cos\theta) = 0 \qquad n = 16,\ldots 25$

16	17	18	19	20	21	22	23	24	25
.00000 90.000	.17408 79.975	.29277 72.976°	.38253 67.509°	.45380 63.012°	.51207 59.198°	.56069 55.896°	.60189 52.994°	.63722 50.415°	.66782 48.101°
		.00000 90.000	.12582 82.772°	.22467 77.016°	.30541 72.217°	.37291 68.105°	.43029 64.514°	.47967 61.336°	.52258 58.495°
				.00000 90.000°	.10182 84.156°	.18690 79.228°	.25938 74.967°	.32195 71.219°	.37653 67.881°
						.00000 90.000°	.08672 85.025°	.16177 80.690°	.22745 76.853
								.00000 90.000°	.07609 85.636°

$P_n^{16}(\cos\theta) = 0 \qquad n = 17,\ldots 25$

17	18	19	20	21	22	23	24	25
.00000 90.000°	.16903 80.269°	.28475 73.456°	.37266 68.120°	.44278 63.719°	.50037 59.976°	.54863 56.727°	.58968 53.866°	.62502 51.316°
		.00000 90.000°	.12235 82.972°	.21874 77.365°	.29772 72.679°	.36398 68.655°	.42049 65.134°	.46928 62.012°
				.00000 90.000°	.09915 84.310°	.18218 79.503°	.25309 75.339°	.31448 71.671°
						.00000 90.000	.08456 85.149°	.15788 80.916°
								.00000 90.000°

$P_n^{17}(\cos\theta) = 0 \qquad n = 18,\ldots 25$

18	19	20	21	22	23	24	25
.00000 90.000°	.16440 80.538°	.27735 73.898°	.36352 68.684°	.43253 64.372	.48943 60.697°	.53731 57.500	.57818 54.677°
	.00000 90.000	.12582 82.772°	.11916 85.157	.21326 77.687°	.29059 73.107	.35566 69.166	.41133 65.712
				.00000 90.000°	.09668 84.452°	.17781 79.758°	.24724 75.685
						.00000 90.000°	.08255 85.265°

$P_n^{18}(\cos\theta) = 0 \qquad n = 19,\ldots 25$

19	20	21	22	23	24	25
.00000 90.000°	.16013 80.786	.27050 74.306°	.35501 69.206	.42295 64.979	.47916 61.366	.52665 58.221
		.00000 90.000°	.11620 83.327	.20817 77.985	.23[illegible] 72.504	.34789 69.542
				.00000 90.000	.09439 84.584°	[illegible] 79.925°
						[illegible] 90.000°

TABLE 2 (Concluded)

$P_n^{19}(\cos\theta) = 0 \qquad n = 20,\ldots 25$

20	21	22	23	24	25
.00000 90.000°	.15617 81.015°	.26414 74.684°	.34708 69.691°	.41399 65.545°	.46955 61.995°
		.00000 90.000°	.11345 83.486°	.20343 78.263°	.27774 73.875°
				.00000 90.000°	.09225 84.707°

$P_n^{20}(\cos\theta) = 0 \qquad n = 21,\ldots 25$

21	22	23	24	25
.00000 90.000°	.15250 81.228°	.25820 75.037°	.33965 70.144°	.40557 66.073°
		.00000 90.000°	.11088 83.634°	.19899 78.522°
				.00000 90.000°

$P_n^{21}(\cos\theta) = 0 \qquad n = 22,\ldots 25$

22	23	24	25
.00000 90.000°	.14907 81.427°	.25265 75.366°	.33269 70.568°
		.00000 90.000°	.10849 83.772°

$P_n^{22}(\cos\theta) = 0 \qquad n = 23,\ldots 25$

23	24	25
.00000 90.000°	.14586 81.613°	.24744 75.674°
		.00000 90.000°

$P_n^{23}(\cos\theta) = 0 \qquad n = 24,25$

24	25
.00000 90.000°	.14286 81.787°

$P_{25}^{24}(\cos\theta) = 0$

25
.00000 90.000°

TABLE 3. CROSS-REFERENCED ZEROES

Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n
.99556	5.403°	0	25	.95983	16.294°	3	22	.92364	22.537°	6	25	.88706	27.494°	0	11	.85246	31.520°	1	18	.81756	35.158°	7	24
.99519	5.624°	0	24	.95926	16.410°	1	24	.92144	22.863°	1	25	.88695	27.508°	5	18	.85149	31.626°	7	20	.81700	35.215°	4	23
.99477	5.863°	0	23	.95707	16.849°	2	17	.92130	22.884°	3	24	.88642	27.574°	0	24	.85094	31.686°	5	22	.81693	35.222°	7	18
.99429	6.123°	0	22	.95601	17.057°	3	21	.92065	22.979°	1	17	.88608	27.616°	2	17	.84972	31.819°	3	23	.81612	35.302°	3	10
.99375	6.408°	0	21	.95582	17.094°	0	18	.92010	23.059°	0	21	.88508	27.738°	1	14	.84959	31.833°	8	22	.81594	35.320°	6	16
.99313	6.721°	0	20	.95575	17.109°	1	23	.91953	23.142°	1	9	.88373	27.905°	5	25	.84821	31.983°	0	15	.81570	35.344°	1	16
.99241	7.065°	0	19	.95569	17.120°	4	25	.91760	23.423°	0	13	.88342	27.943°	8	25	.84818	31.986°	9	24	.81521	35.392°	5	14
.99157	7.447°	0	18	.95331	17.577°	1	12	.91723	23.475°	6	24	.88143	28.185°	6	20	.84703	32.110°	6	24	.81506	35.407°	4	12
.99058	7.872°	0	17	.95200	17.825°	4	24	.91664	23.561°	2	20	.88141	28.187°	2	10	.84698	32.115°	3	17	.81402	35.510°	5	25
.98940	8.349°	0	16	.95176	17.869°	1	22	.91643	23.591°	5	21	.88026	28.326°	4	22	.84661	32.155°	3	11	.81395	35.516°	1	21
.98873	8.611°	1	25	.95173	17.875°	2	16	.91611	23.636°	2	12	.88024	28.329°	0	17	.84635	32.183°	1	12	.81055	35.851°	2	13
.98799	8.888°	0	15	.95162	17.895°	3	20	.91575	23.687°	4	18	.87995	28.363°	2	23	.84407	32.428°	4	25	.80845	36.055°	2	18
.98779	8.963°	1	24	.95068	18.071°	0	17	.91544	23.731°	3	15	.87990	28.370°	4	15	.84346	32.492°	1	23	.80782	36.116°	2	23
.98673	9.344°	1	23	.94911	18.358°	0	7	.91498	23.797°	1	24	.87929	28.443°	1	20	.84315	32.526	2	20	.80663	36.232°	11	25
.98628	9.501°	0	14	.94782	18.591°	4	23	.91452	23.862°	3	23	.87706	28.710°	7	22	.84154	32.697°	4	13	.80583	36.310°	3	15
.98553	9.760°	1	22	.94720	18.701°	1	21	.91223	24.184°	0	20	.87675	28.747°	0	23	.84110	32.744°	4	19	.80489	36.401°	0	23
.98418	10.204°	0	13	.94654	18.820°	3	19	.91088	24.373°	1	16	.87636	28.793°	3	19	.83912	32.953°	0	20	.80417	36.470°	10	23
.98415	10.214°	1	21	.94591	18.931°	2	25	.90998	24.497°	6	23	.87411	29.060°	5	24	.83851	33.017°	5	15	.80378	36.507°	3	20
.98257	10.712°	1	20	.94533	19.034°	2	15	.90803	24.765°	5	20	.87356	29.125°	5	17	.83688	33.188°	5	21	.80370	36.515°	0	18
.98156	11.020°	0	12	.94490	19.109	1	11	.90797	24.773°	2	19	.87354	29.127°	8	24	.83667	33.210°	6	17	.80347	36.537°	3	25
.98074	11.262°	1	19	.94458	19.165°	0	16	.90771	24.810°	1	23	.87209	29.297°	2	16	.83637	33.241°	3	22	.80332	36.552°	4	17
.97975	11.550°	2	25	.94307	19.426°	4	22	.90683	24.929°	3	22	.87198	29.311°	3	25	.83603	33.277°	0	9	.80214	36.665°	8	25
.97861	11.871°	1	18	.94297	19.443°	0	25	.90657	24.964°	4	25	.87174	29.339°	1	7	.83602	33.278°	2	25	.80210	36.669°	5	19
.97823	11.978°	0	11	.94198	19.614°	1	20	.90618	25.017°	0	5	.87011	29.528°	3	12	.83559	33.322°	1	17	.80175	36.702°	7	23
.97806	12.023°	2	24	.94144	19.705°	2	24	.90583	25.065°	4	17	.86926	29.627°	2	22	.83557	33.325°	7	19	.80168	36.709°	6	21
.97666	12.402°	0	25	.94066	19.836°	5	25	.90457	25.235°	7	25	.86898	29.659°	4	21	.83521	33.362°	2	14	.80158	36.719°	0	13
.97616	12.536°	2	23	.94061	19.846°	3	18	.90412	25.295°	0	12	.86882	29.678°	6	19	.83495	33.389°	8	21	.80143	36.734°	9	21
.97611	12.550°	1	17	.93827	20.236°	0	24	.90340	25.391°	3	14	.86780	29.796°	1	13	.83464	33.421°	9	23	.80076	36.797°	4	22
.97473	12.908°	0	24	.93765	20.340°	4	21	.90316	25.424°	0	19	.86688	29.902°	1	19	.83455	33.431°	10	25	.79884	36.980°	5	24
.97400	13.094°	2	22	.93756	20.354°	2	14	.90174	25.612°	6	22	.86652	29.943°	1	25	.83381	33.508°	6	23	.79848	37.015°	1	25
.97391	13.118°	0	10	.93727	20.401°	0	15	.90100	25.711°	2	11	.86581	30.024°	0	22	.83344	33.546°	0	25	.79835	37.027°	8	19
.97313	13.312°	1	16	.93639	20.546°	2	23	.89976	25.874°	1	8	.86563	30.045°	0	16	.83156	33.741°	7	25	.79667	37.187°	0	8
.97254	13.458°	0	23	.93593	20.620°	1	19	.89946	25.913°	1	22	.86518	30.096°	7	21	.83134	33.764°	4	24	.79600	37.250°	1	20
.97153	13.705°	2	21	.93571	20.658°	5	24	.89920	25.947°	1	15	.86506	30.110°	0	10	.83022	33.878°	1	6	.79489	37.356°	7	17
.97006	14.056°	0	22	.93400	20.933°	1	10	.89886	25.992°	4	24	.86325	30.316°	5	23	.82965	33.937°	1	22	.79201	37.626°	1	15
.96957	14.171°	1	15	.93364	20.990°	3	17	.89831	26.064°	5	19	.86284	30.363°	3	18	.82823	34.083°	3	16	.79095	37.726°	2	22
.96872	14.368°	3	25	.93297	21.097°	0	23	.89806	26.096°	3	21	.86271	30.378°	4	14	.82720	34.188°	0	14	.79095	37.726°	6	15
.96869	14.375	2	20	.93247	21.177°	0	6	.89790	26.117°	2	18	.86235	30.418°	8	23	.82708	34.200°	2	19	.78985	37.828°	11	24
.96816	14.497°	0	9	.93141	21.344°	4	20	.89777	26.134°	2	25	.86151	30.513°	3	24	.82371	34.542°	4	18	.78782	38.018°	0	22
.96723	14.709°	0	21	.93067	21.461°	2	22	.89653	26.294°	7	24	.86114	30.556°	0	4	.82275	34.639°	2	24	.78763	38.036°	3	24
.96612	14.957°	3	24	.93010	21.550°	5	23	.89499	26.493°	0	25	.86011	30.671°	9	25	.82271	34.643°	0	19	.78667	38.124°	2	17
.96541	15.115°	2	19	.92890	21.736°	1	18	.89405	26.614°	4	10	.85873	30.825°	6	25	.82117	34.797°	3	21	.78645	38.145°	5	13
.96525	15.150°	1	14	.92843	21.808°	0	14	.89260	26.798°	0	18	.85765	30.947°	5	16	.82074	34.841°	5	20	.78568	38.217°	10	22
.96397	15.427°	0	20	.92802	21.872°	2	13	.89230	26.836°	6	21	.85709	31.009°	2	21	.82033	34.882°	10	24	.78564	38.220°	8	24
.96318	15.597°	3	23	.92730	21.982°	3	25	.89014	27.109°	4	23	.85604	31.125°	4	20	.82000	34.915°	0	24	.78448	38.327°	1	10
.96238	15.766°	1	25	.92696	22.035°	0	22	.89006	27.119°	1	21	.85568	31.165°	1	24	.81985	34.931°	2	8	.78372	38.391°	7	22
.96158	15.935°	2	18	.92537	22.276°	3	16	.88939	27.203°	2	24	.85540	31.196°	2	9	.81928	34.987°	1	11	.78375	38.394°	3	19
.96029	16.201°	0	8	.92418	22.454°	4	19	.88860	27.302°	3	13	.85539	31.197°	2	15	.81919	34.996°	9	22	.78232	38.527°	1	24
.96021	16.218°	0	19	.92413	22.462°	2	21	.88799	27.378°	3	20	.85407	31.343°	6	18	.81881	35.034°	6	22	.78229	38.529°	4	21
.95994	16.273°	1	13	.92372	22.524°	5	22	.88743	27.448°	7	23	.85336	31.421°	0	21	.81804	35.111°	8	20	.78200	38.556°	6	20

TABLE 3 (Continued)

Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n
.78179	38.575°	6	25	.74783	41.597°	8	17	.71497	44.359°	8	16	.67719	47.376°	1	8	.64445	49.876°	9	24	.61172	52.286°	11	22
.78175	38.579°	5	23	.74735	41.639°	7	25	.71395	44.442°	10	24	.67708	47.384°	7	22	.64358	49.941°	5	10	.61167	52.290°	1	21
.78151	38.601°	0	17	.74633	41.726°	0	20	.71238	44.571°	7	19	.67653	47.427°	10	18	.64355	49.943°	12	20	.61093	52.344°	5	24
.78132	38.619°	4	11	.74576	41.776°	8	22	.71074	44.705°	10	19	.67618	47.454°	3	23	.64342	49.953°	9	20	.60999	52.411°	6	22
.78087	38.660°	9	20	.74574	41.777°	3	13	.71067	44.710°	5	24	.67615	47.456°	9	21	.64326	49.964°	1	22	.60890	52.486°	8	25
.78040	38.703°	5	18	.74392	41.934°	6	23	.71060	44.716°	8	25	.67574	47.488°	4	17	.64310	49.976°	7	17	.60625	52.681°	1	14
.77997	38.742°	2	12	.74370	41.953°	1	22	.70864	44.875°	4	18	.67565	47.496°	2	25	.64235	50.033°	0	13	.60539	52.743°	9	19
.77920	38.813°	4	16	.74308	42.005°	13	25	.70836	44.898°	12	22	.67505	47.542°	8	15	.64114	50.123°	6	23	.60489	52.779°	9	15
.77878	38.851°	3	14	.74260	42.046°	2	24	.70705	45.005°	14	25	.67492	47.552°	6	12	.64064	50.160°	3	7	.60373	52.863°	2	19
.77620	39.086°	12	25	.74153	42.138°	0	7	.70582	45.104°	4	22	.67390	47.631°	11	24	.63930	50.260°	5	25	.60252	52.949°	3	24
.77554	39.146°	3	9	.74145	42.145°	2	11	.70480	45.187°	3	12	.67357	47.657°	0	25	.63910	50.275°	2	20	.60224	52.970°	12	19
.77537	39.162°	1	19	.74039	42.236°	5	21	.70455	45.206°	9	22	.67308	47.695°	4	13	.63722	50.415°	15	24	.60189	52.994°	15	23
.77524	39.173°	8	18	.74012	42.258°	0	24	.70414	45.240°	5	11	.67146	47.820°	9	25	.63705	50.428°	4	16	.60055	53.091°	0	19
.77460	39.232°	0	3	.73968	42.296°	7	20	.70343	45.297°	7	23	.67124	47.837°	1	23	.63644	50.473°	3	18	.59921	53.187°	10	24
.77179	39.485°	2	21	.73967	42.296°	10	20	.70165	45.440°	6	17	.67092	47.862°	3	19	.63605	50.502°	0	20	.59865	53.227°	7	16
.77074	39.580°	11	23	.73877	42.373°	1	9	.70152	45.451°	3	16	.67004	47.930°	2	21	.63559	50.536°	10	17	.59848	53.239°	1	24
.77039	39.611°	9	25	.73737	42.493°	4	10	.70082	45.507°	3	24	.66875	48.030°	6	24	.63288	50.737°	1	11	.59752	53.307°	12	23
.76990	39.655°	0	12	.73683	42.538°	4	19	.70080	45.509°	3	20	.66782	48.101°	15	25	.63175	50.821°	6	19	.59741	53.316°	4	8
.76981	39.663°	3	23	.73671	42.548°	7	15	.69946	45.616°	11	25	.66714	48.153°	0	21	.63119	50.862°	3	25	.59719	53.331°	4	22
.76946	39.695°	2	7	.73621	42.590°	10	25	.69767	45.760°	7	14	.66579	48.257°	6	20	.63076	50.894°	12	24	.59639	53.388°	3	17
.76887	39.748°	4	25	.73414	42.766°	12	23	.69725	45.793°	2	22	.66479	48.334°	6	16	.62988	50.959°	8	22	.59538	53.460°	8	21
.76855	39.776°	7	16	.73343	42.826°	3	17	.69612	45.884°	1	24	.66388	48.404°	13	22	.62980	50.965°	10	25	.59496	53.490°	2	12
.76844	39.786°	0	21	.73276	42.881°	6	18	.69576	45.912°	2	18	.66378	48.411°	1	19	.62891	51.030°	1	18	.59449	53.523°	6	25
.76697	39.917°	8	23	.73216	42.932°	5	25	.69536	45.944°	6	21	.66364	48.422°	3	15	.62882	51.037°	4	23	.59321	53.615°	5	20
.76506	40.088°	1	5	.73052	43.070°	2	15	.69498	45.974°	9	17	.66201	48.547°	2	17	.62873	51.043°	13	21	.59313	53.621°	7	23
.76438	40.148°	10	21	.73015	43.101°	0	11	.69475	45.993°	2	6	.66121	48.608°	0	6	.62840	51.068°	5	21	.59229	53.680°	6	18
.76417	40.167°	1	23	.72939	43.164°	4	23	.69449	46.014°	0	22	.66121	48.608°	8	19	.62738	51.143°	2	9	.59201	53.700°	5	13
.76398	40.183°	6	24	.72935	43.168°	9	23	.69407	46.047	11	20	.66016	48.688°	8	23	.62729	51.150°	1	25	.59170	53.722°	1	7
.76352	40.225°	1	14	.72887	43.208°	1	13	.69407	46.047°	13	23	.65997	48.702°	12	25	.62697	51.173°	10	21	.59114	53.762°	4	15
.76327	40.247°	7	21	.72861	43.230°	9	18	.69405	46.048°	1	20	.65997	48.703°	10	22	.62580	51.259°	8	14	.58997	53.845°	2	22
.76240	40.324°	5	22	.72685	43.377°	3	21	.69392	46.059°	2	14	.65944	48.743°	11	19	.62502	51.316°	16	25	.58968	53.866°	16	24
.76161	40.394°	2	25	.72670	43.390°	7	24	.69357	46.086°	8	20	.65928	48.755°	5	22	.62442	51.360°	7	24	.58885	53.925°	10	20
.76116	40.434°	4	20	.72482	43.546°	5	16	.69333	46.106°	6	25	.65767	48.877°	0	17	.62340	51.435°	8	18	.58850	53.949°	1	17
.76102	40.446°	2	16	.72479	43.549°	2	19	.69206	46.207°	2	10	.65695	48.932°	4	24	.62246	51.504°	2	16	.58764	54.010°	0	22
.76054	40.488°	3	18	.72442	43.580°	0	15	.69169	46.236°	0	18	.65465	49.107°	1	4	.62186	51.548°	2	23	.58739	54.028°	13	20
.76044	40.497°	6	14	.72368	43.641°	1	17	.69103	46.288°	1	16	.65445	49.122°	9	16	.62066	51.636°	6	15	.58732	54.033°	0	12
.75926	40.601°	0	25	.72353	43.653°	11	21	.68881	46.464°	5	15	.65327	49.211°	3	11	.62038	51.656°	4	12	.58726	54.037°	3	10
.75926	40.601°	6	19	.72281	43.713°	3	25	.68873	46.471°	10	23	.65263	49.260°	5	18	.61961	51.712°	0	23	.58710	54.049°	7	12
.75687	40.811°	9	19	.72263	43.728°	6	13	.68729	46.584°	0	14	.65239	49.278°	[illegible]	[illegible]	.61825	51.811°	11	18	.58593	54.131°	10	16
.75656	40.838°	12	24	.72150	43.822°	8	21	.68689	46.615°	8	24	.65229	49.286°	7	[illegible]	.61823	51.813°	3	14	.58547	54.164°	11	25
.75540	40.939°	0	16	.72128	43.840°	2	23	.68653	46.644°	5	23	.65026	49.439°	2	24	.61788	51.839°	0	16	.58492	54.202°	4	25
.75495	40.979°	5	17	.72121	43.846°	6	22	.68621	46.669°	5	19	.65015	49.447°	14	23	.61752	51.865°	13	25	.58426	54.249°	13	24
.75149	41.280°	1	18	.72097	43.866°	0	19	.68619	46.671°	1	12	.64951	49.496°	2	13	.61705	51.899°	3	21	.58141	54.450°	3	20
.75114	41.310°	9	24	.72049	43.905°	1	21	.68205	46.996°	4	25	.64900	49.534°	7	13	.61488	52.057°	14	22	.57945	54.588°	2	25
.75039	41.376°	4	15	.72023	43.926°	13	24	.68058	47.111°	14	24	.64860	49.564°	4	20	.61397	52.123°	9	23	.57941	54.591°	9	22
.75035	41.379°	5	12	.71988	43.955°	3	8	.68054	47.114°	7	18	.64843	49.577°	3	22	.61366	52.145°	4	19	.57915	54.609°	5	23
.75028	41.385°	4	24	.71866	44.056°	0	23	.67941	47.202°	0	10	.64809	49.602°	0	24	.61344	52.161°	5	17	.57882	54.632°	8	17
.74991	41.417°	2	20	.71833	44.084°	1	25	.67908	47.228°	4	21	.64709	49.678°	7	21	.61342	52.163°	6	11	.57818	54.677°	17	25
.74968	41.437°	3	22	.71560	44.308°	4	14	.67860	47.266°	4	9	.64528	49.813°	5	14	.61337	52.166°	0	9	.57766	54.714°	0	25
.74883	41.511°	11	22	.71520	44.340°	5	20	.67849	47.274°	12	21	.64487	49.844°	11	23	.61275	52.211°	7	20	.57760	54.718°	8	24

TABLE 3 (Continued)

Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n
.57735	54.736°	0	2	.54237	57.155°	8	23	.51087	59.278°	0	20	.47446	61.676°	2	25	.44198	63.770°	6	21	.40704	65.981°	1	22
.57735	54.736°	2	5	.54139	57.222°	1	16	.51028	59.317°	8	19	.47375	61.722°	7	17	.44143	63.805°	2	10	.40617	66.036°	8	20
57583	54.842°	1	20	.54073	57.267°	3	19	.50950	59.369°	0	23	.47300	61.771°	0	25	.44081	63.844°	14	22	.40585	66.056°	0	7
.57578	54.846°	2	15	.54060	57.275°	2	8	.50816	59.459°	9	17	.47250	61.803°	7	23	.44022	63.882°	3	17	.40557	66.073°	20	25
.57469	54.922°	6	21	.54000	57.316°	9	21	.50782	59.481°	11	16	.47223	61.821°	7	20	.43970	63.915°	4	26	.40556	66.074°	12	22
.57359	54.999°	11	21	.53847	57.421°	0	5	.50647	59.571°	5	18	.47213	61.827°	4	16	.43542	64.188°	6	18	.40542	66.083°	5	19
.57358	55.000°	14	21	.53826	57.435°	12	25	.50635	59.579°	7	11	.47122	61.887	2	22	.43524	64.199°	2	26	.40488	66.116°	13	17
.57339	55.013°	4	18	.53815	57.442°	13	19	.50313	59.792°	5	21	.46964	61.989°	4	13	.43465	64.237°	7	25	.40426	66.156°	12	19
.57320	55.026°	7	19	.53731	57.500°	17	24	.50270	59.821°	13	22	.46955	61.995°	19	25	.43442	64.252°	1	17	.40372	66.189°	6	23
.57184	55.121°	14	25	.53679	57.535°	5	25	.50261	59.827°	8	22	.46936	62.008°	0	22	.43416	64.268°	14	25	.40362	66.196°	9	24
.57097	55.182°	0	15	.53616	57.577°	4	14	.50163	59.892°	6	13	.46928	62.012°	16	25	.43379	64.291°	0	26	.40052	66.389°	7	13
.57049	55.216°	3	23	.53499	57.657°	1	19	.50120	59.921°	5	24	.46890	62.037°	4	10	.43340	64.317°	0	10	.39953	66.451°	1	11
.56863	55.345°	11	17	.53456	57.686°	3	22	.50091	59.940°	3	9	.46885	62.040°	1	6	.43253	64.372°	17	22	.39747	66.580°	2	15
.56735	55.434°	5	16	.53448	57.691°	6	20	.50037	59.976°	16	22	.46762	62.120°	11	22	.43189	64.413°	4	21	.39736	66.587°	7	10
.56721	55.444°	6	14	.53405	57.720°	14	24	.49952	60.032°	12	24	.46703	62.158°	2	19	.43187	64.414°	10	23	.39655	66.637°	3	19
.56633	55.505°	1	23	.53195	57.863°	6	10	.49840	60.106°	8	25	.46568	62.246°	14	19	.43166	64.427°	11	15	.39608	66.667°	4	23
.56524	55.581°	1	10	.53031	57.973°	1	22	.49586	60.274°	3	12	.46457	62.318°	0	19	.43029	64.514°	15	23	.39541	66.709°	8	17
.56466	55.621°	10	23	.53001	57.994°	3	25	.49479	60.344°	9	20	.46457	62.318°	9	13	.43016	64.522°	10	17	.39514	66.725°	13	23
.56387	55.676°	8	13	.52939	58.036°	11	20	.49440	60.370°	3	15	.46440	62.329°	12	20	.42912	64.588°	10	20	.39415	66.787°	0	15
.56324	55.720°	3	13	.52814	58.120°	9	24	.49434	60.374°	3	24	.46401	62.354°	11	25	.42891	64.602°	3	14	.39360	66.821°	9	21
.56324	55.720°	9	25	.52734	58.174°	7	18	.49412	60.388°	3	21	46179	62.498°	8	15	.42799	64.660°	7	22	.39323	66.844°	14	18
.56307	55.732°	2	18	.52710	58.190°	2	11	.49406	60.392°	3	18	.46150	62.516°	5	23	.42774	64.676°	6	15	.39295	66.862°	13	20
.56268	55.758°	6	24	.52709	58.191°	6	23	.49253	60.493°	12	17	.46141	62.522°	2	16	.42619	64.774°	2	21	.39290	66.865°	10	25
.56185	55.816°	5	9	.52674	58.215°	1	25	.49222	60.513°	10	18	.45916	62.667°	8	24	.42616	64.776°	5	25	.39235	66.899°	1	19
.56145	55.844°	4	21	52668	58.219°	4	17	.49206	60.524°	6	16	.45802	62.741°	0	16	.42434	64.891°	0	21	.39172	66.938°	2	23
.56084	55.886°	9	18	52665	58.221°	18	25	.49102	60.592°	1	24	.45754	62.772°	8	21	.42295	64.979°	18	23	.39157	66.948°	7	24
.56069	55.896°	15	22	.52586	58.274°	5	12	.49078	60.608°	14	23	.45744	62.778°	5	20	.42173	65.056°	4	18	.39087	66.991°	6	20
.55977	55.960°	0	18	.52575	58.282°	8	16	.48981	60.672°	1	21	.45736	62.783°	8	18	.42091	65.108°	2	7	.39030	67.027°	0	23
.55945	55.982°	12	22	.52553	58.296°	0	8	.48943	60.697°	17	23	.45562	62.895°	12	23	.42080	65.115°	3	25	.38986	67.054°	5	16
.55782	56.095°	7	22	.52543	58.303°	10	22	.48869	60.746°	9	23	.45463	62.959°	3	23	.42064	65.125°	1	14	.38825	67.154°	4	12
.55586	56.230°	8	20	.52462	58.357°	14	20	.48844	60.762°	6	19	.45380	63.012°	15	20	.42057	65.130°	11	24	.38550	67.325°	14	24
.55402	56.357°	2	21	.52462	58.358°	10	15	.48823	60.776°	1	18	.45348	63.033°	2	13	.42049	65.134°	16	24	.38527	67.339°	3	8
.55401	56.357°	4	11	.52258	58.495°	15	25	.48793	60.795°	13	25	.45265	63.086°	5	17	.42008	65.160°	6	9	.38362	67.442°	8	14
.55290	56.434°	5	19	.52223	58.518°	3	6	.48709	60.850°	6	22	.45214	63.119°	13	21	.42002	65.164°	7	19	.38326	67.464°	5	24
.55286	56.437°	4	24	.52090	58.607°	4	20	.48673	60.874°	6	25	.45132	63.172°	1	23	.41988	65.173°	6	12	.38254	67.509°	14	21
.55276	56.443°	12	18	.52021	58.654°	2	14	.48606	60.918°	1	15	.44849	63.353°	0	13	.41820	65.279°	1	25	.38253	67.509°	15	19
.55162	56.522°	0	21	.51910	58.728°	0	11	.48412	61.045°	8	12	.44841	63.358°	3	20	.41763	65.315°	12	16	.38214	67.534°	10	22
.55099	56.565°	11	24	.51781	58.815°	7	21	.48291	61.124°	1	12	.44747	63.419°	6	24	.41708	65.349°	5	22	.38178	67.556°	9	18
.55064	56.589°	1	13	.51706	58.865°	4	23	.48063	61.274°	10	21	.44721	63.435°	1	3	.41684	65.365°	11	21	.38103	67.602°	4	20
.54956	56.663°	3	16	.51607	58.931°	2	17	48047	61.284°	7	14	.44721	63.435°	5	8	.41660	65.380°	11	18	.38046	67.638°	8	25
.54863	56.727°	16	23	51553	58.967°	12	21	.48038	61.289°	4	7	.44721	63.435°	5	14	.41527	65.464°	8	23	.37803	67.788°	3	24
.54756	56.800	7	25	.51525	58.986°	0	14	.47967	61.336°	15	24	.44721	63.435°	10	14	.41417	65.533°	2	18	.37796	67.792°	2	4
.54725	56.822°	2	24	.51498	59.004°	10	25	.47918	61.368°	18	24	.44690	63.455°	9	25	.41399	65.545°	19	24	.37796	67.792°	8	11
.54631	56.886	13	23	.51331	59.115°	2	20	.47804	61.384°	4	25	.44513	63.568°	9	16	.41227	65.653°	3	11	.37780	67.802°	7	21
54624	56.890°	6	17	.51269	59.157°	0	17	.47854	61.410°	13	18	.44450	63.609°	13	24	.41175	65.685°	0	18	.37778	67.804°	3	16
.54542	56.947°	0	24	.51268	59.158°	5	15	.47792	61.450°	1	9	44414	63.631°	9	22	.41133	65.712°	17	25	.37653	67.881°	15	25
.54530	56.955°	7	15	.51214	59.194°	7	24	.47770	61.465°	11	19	44412	63.633°	1	20	.41062	65.756°	7	16	.37550	67.945°	1	24
.54444	57.014°	10	19	.51207	59.198°	15	21	.47696	61.513°	4	22	.44278	63.719°	16	21	.41030	65.776°	3	22	.37549	67.945°	2	20
.54344	57.082°	5	22	.51199	59.204°	11	23	.47587	61.584°	10	24	.44256	63.733°	9	19	.41011	65.788°	12	25	.37398	68.039°	6	17
54319	57.099°	9	14	.51136	59.246°	2	23	.47468	61.661°	4	19	.44236	63.746°	5	11	.40798	65.922°	4	15	.37371	68.056°	0	20

TABLE 3 (Continued)

Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n	Cos θ	θ	m	n
.37291	68.105	15	22	.33965	70.144°	20	24	.30541	72.217°	15	21	.27319	74.146°	6	23	.24126	76.039°	4	13	.20762	78.017°	4	8
.37266	68.120	16	20	.33866	70.205°	13	22	.30521	72.229°	3	25	.27271	74.174°	9	24	.23955	76.140°	1	19	.20380	78.241°	5	23
.37261	68.123	2	12	.33748	70.277°	3	18	.30496	72.244°	3	15	.27109	74.271°	5	12	.23939	76.149°	9	21	.20367	78.249°	11	25
.37217	68.150°	1	16	.33621	70.354°	11	25	.30491	72.247°	3	20	.27050	74.306°	18	21	.23928	76.156°	13	23	.20360	78.252°	12	19
.37163	68.184	11	23	.33595	70.370°	9	20	.30333	72.342°	1	25	.26992	74.341°	3	17	.23862	76.195°	0	6	.20343	78.263°	19	24
.37142	68.184	6	25	.33564	70.389°	5	23	.30232	72.403°	6	16	.26979	74.348°	9	19	.23821	76.219°	6	20	.20289	78.294°	2	15
.36947	68.317°	10	19	.33555	70.394°	7	15	.30199	72.423°	1	20	.26954	74.363°	0	11	.23814	76.223°	13	18	.20220	78.334°	8	24
.36870	68.364°	9	15	.33484	70.437°	5	10	.30151	72.452°	4	6	.26804	74.452°	4	23	.23495	76.412°	8	15	.20119	78.393°	0	15
.36801	68.407	5	13	.33350	70.518°	1	18	.30151	72.452°	14	17	.26636	74.552°	1	17	.23314	76.518°	14	24	.20078	78.417°	3	23
.36783	68.418°	0	12	.33337	70.526°	8	24	.30077	72.498°	9	22	.26628	74.557°	6	18	.23302	76.525°	2	13	.20068	78.423°	8	17
.36721	68.456	5	21	.33333	70.529°	3	5	.30017	72.532°	7	12	.26616	74.564°	14	22	.23224	76.571°	4	20	.20000	78.463°	11	13
.36596	68.533°	8	22	.33333	70.529°	11	14	.29995	72.546°	6	21	.26516	74.623°	10	25	.23209	76.580°	10	22	.19932	78.503°	1	23
.36570	68.549	4	25	.33273	70.565°	6	19	.29983	72.553°	1	15	.26510	74.627°	2	23	.23111	76.637°	14	19	.19899	78.522°	20	25
.36398	68.655°	16	23	.33269	70.568°	21	25	.29980	72.555°	10	18	.26464	74.654°	7	24	.23046	76.676°	0	13	.19848	78.552°	5	16
.36352	68.684°	17	21	.33261	70.572°	12	18	.29964	72.564°	13	24	.26414	74.684°	0	23	.22990	76.709°	7	21	.19754	78.607°	13	20
.36312	68.708	1	8	.33198	70.611°	4	14	.29772	72.679°	16	22	.26414	74.684°	19	22	.22942	76.737°	8	10	.19712	78.632°	6	24
.36229	68.759°	2	25	.33163	70.632°	2	9	.29576	72.707°	1	10	.26383	74.703°	10	15	.22888	76.769°	2	20	.19636	78.676°	0	25
.36195	68.780°	12	24	.33065	70.692	3	23	.29314	72.954°	4	21	.26108	74.866°	10	20	.22885	76.770°	5	14	.19372	78.830°	4	24
.36117	68.828	0	25	.32999	70.732°	14	23	.29277	72.976°	15	18	.25938	74.967°	15	23	.22779	76.833°	0	20	.19337	78.850°	0	18
.36116	68.829°	9	12	.32825	70.838	1	23	.29226	73.007°	14	25	.25905	74.986°	5	24	.22745	76.853°	15	25	.19305	78.869°	6	9
.36078	68.852°	4	17	.32564	70.995	10	21	.29201	73.022°	10	23	.25820	75.037°	6	8	.22609	76.933°	3	7	.19245	78.904°	12	14
.36066	68.853°	3	21	.32495	71.038°	6	24	.29059	73.107°	17	23	.25820	75.037°	20	23	.22577	76.952°	9	16	.19236	78.909°	3	16
.35990	68.906	7	18	.32425	71.080	0	9	.29025	73.127°	4	16	.25798	75.050°	4	18	.22542	76.972°	11	23	.19200	78.930°	14	21
.35828	69.005	11	20	.32402	71.094°	9	25	.29020	73.130°	7	17	.25725	75.093°	6	13	.22467	77.016°	15	20	.19176	78.945°	2	24
.35752	69.052	1	21	.32344	71.129°	4	19	.28920	73.190°	11	19	.25685	75.117°	8	25	.22349	77.086°	5	21	.19112	78.982°	0	24
.35741	69.059	4	9	.32275	71.171°	13	19	.28898	73.143°	7	22	.25634	75.147°	7	19	.22240	77.150°	8	22	.19105	78.986°	7	25
.35566	69.166	17	24	.32225	71.201	8	16	.28927	73.186°	2	21	.25594	75.171°	3	12	.21958	77.316°	3	14	.18998	79.048°	6	17
.35540	69.182	10	16	.32218	71.205	2	14	.28802	73.260°	0	21	.25552	75.195°	3	24	.21952	77.319°	3	21	.18951	79.076°	1	16
.35518	69.195°	9	23	.32195	71.219°	15	24	.28743	73.296°	4	11	.25437	75.264°	11	16	.21930	77.332°	12	24	.18868	79.124°	2	8
.35501	69.206	18	22	.32163	71.239°	12	15	.28644	73.355°	8	13	.25381	75.297°	1	24	.21874	77.365°	16	21	.18735	79.202°	5	25
.35481	69.218	6	22	.32097	71.278°	7	20	.28523	73.427°	1	5	.25337	75.323°	2	18	.21822	77.396°	9	11	.18690	79.228°	15	22
.35354	69.296	2	17	.31933	71.378°	4	24	.28475	73.456	16	19	.25316	75.335°	11	21	.21818	77.398°	6	15	.18681	79.233°	10	19
.35298	69.330	13	25	.31911	71.391	0	14	.28397	73.503°	11	24	.25309	75.339°	16	24	.21761	77.432°	1	21	.18570	79.298°	13	15
.35123	69.437	0	17	.31824	71.444°	2	19	.28394	73.504°	18	24	.25265	75.366°	21	24	.21760	77.432°	10	17	.18500	79.339°	3	25
.35065	69.473	6	14	.31656	71.545°	0	19	.28369	73.519	2	16	.25189	75.411°	0	18	.21567	77.545°	6	22	.18386	79.406°	1	25
.35053	69.480	3	13	.31624	71.565°	11	22	.28263	73.582°	5	22	.25091	75.469°	6	25	.21559	77.550°	9	23	.18343	79.430°	0	8
.34806	69.631	12	21	.31611	71.572	5	15	.28160	73.644°	0	16	.25056	75.489°	2	6	.21535	77.564°	1	14	.18333	79.436°	4	17
.34789	69.642	18	25	.31510	71.573°	2	24	.28148	73.652°	12	20	.24929	75.565°	1	12	.21365	77.664°	13	25	.18250	79.485°	7	18
.34747	69.667	4	22	.31[illegible]	71.574	6	11	.28095	73.683	9	23	.24751	75.670°	5	19	.21326	77.687°	17	22	.18218	79.503°	16	23
.34730	69.678°	8	19	.31522	71.626	7	25	.27944	73.773	8	18	.24744	75.674°	22	25	.21122	77.806°	4	22	.18117	79.562°	6	10
.34708	69.691	19	23	.31504	71.637	0	24	.27805	73.856°	3	22	.24743	75.675°	8	20	.21025	77.863°	11	18	.18088	79.579°	11	20
.34647	69.732	10	13	.31448	71.671	16	25	.27774	73.875	19	25	.24724	75.685°	17	25	.20937	77.914°	10	24	.17966	79.650°	2	17
.34596	69.763	5	18	.31372	71.716	14	20	.27740	73.890°	5	17	.24692	75.705°	4	25	.20930	77.919	1	7	.17961	79.653°	14	16
.34530	69.800	10	24	.31109	71.875	13	16	.27735	73.898	5	7	.24593	75.763°	12	22	.20888	77.943°	7	16	.17848	79.719°	0	17
.34358	69.905	7	23	.31102	71.879	5	20	.27735	73.898	17	20	.24585	75.768°	12	17	.20869	77.955°	2	22	.17781	79.758°	17	24
.34344	69.913	11	17	.31041	71.916	9	17	.27656	73.945	12	25	.24534	75.798	7	14	.20861	77.959°	7	23	.17583	79.873°	9	19
.34329	69.922	2	22	.31039	71.918	8	21	.27594	73.989°	1	22	.24462	75.841°	2	25	.20851	77.965°	10	12	.17547	79.894°	12	21
.34272	69.957	1	13	.30909	71.995	5	25	.27444	74.072°	9	14	.24387	75.885°	0	25	.20823	77.981°	4	15	.17546	79.895°	5	18
.34194	70.005	0	22	.30760	72.085	12	23	.27369	74.116	2	11	.24254	75.964°	7	9	.20817	77.985°	18	23	.17408	79.975°	15	17
.33998	70.124	2	4	.30716	72.112	3	10	.27340	74.128	13	21	.24211	75.989°	3	19	.20786	78.003°	0	22	.17373	79.995°	18	25

TABLE 3 (Concluded)

Cos η	η	m	n
.17316	80.029°	3	9
.17125	80.140°	7	11
.17120	80.142°	3	18
.17053	80.181	13	22
.16984	80.221	9	20
.16919	80.260	1	18
.16903	80.269°	16	18
.16852	80.298	6	19
.16598	80.446°	14	23
.16528	80.487°	1	9
.16443	80.536°	10	21
.16440	80.538°	17	19
.16384	80.570°	4	19
.16279	80.631°	8	12
.16235	80.657	7	20
.16177	80.690°	15	24
.16121	80.723°	2	19
.16093	80.739°	4	10
.16036	80.772°	0	19
.16013	80.786°	18	20
.15951	80.822	11	22
.15788	80.916	16	25
.15735	80.947°	5	20
.15681	80.978	8	21
.15617	81.015	19	21
.15549	81.055	9	13
.15500	81.083	12	23
.15426	81.126°	3	20
.15270	81.212	1	20
.15250	81.228	20	22
.15181	81.268°	9	22
.15163	81.279	2	10
.15158	81.282	6	21
.15097	81.317	5	11
.15085	81.324	13	24
.14907	81.427°	10	14
.14907	81.427	21	23
.14887	81.438	0	10
.14814	81.481°	4	21
.14725	81.532	10	23
.14702	81.546	14	25
.14640	81.582	7	22
.14619	81.594	2	21
.14596	81.613	22	24
.14556	81.630	0	21
.14339	81.756	11	15
.14308	81.774	11	24
.14246	81.797	23	25
.14270	81.796	5	22
.14266	81.798	6	12

Cos η	η	m	n
.14172	81.853°	8	23
.14089	81.901°	3	11
.14039	81.930°	3	22
.13928	81.994°	1	22
.13925	81.996°	12	25
.13832	82.049°	12	16
.13782	82.078°	6	23
.13746	82.099°	9	24
.13655	82.152°	1	11
.13559	82.207°	7	13
.13523	82.228°	4	23
.13375	82.314°	13	17
.13374	82.314°	2	23
.13356	82.325°	10	25
.13341	82.333°	7	24
.13326	82.342°	0	23
.13215	82.406°	4	12
.13060	82.496°	5	24
.12960	82.553	14	18
.12948	82.561°	9	14
.12939	82.566°	8	25
.12892	82.599	3	24
.12796	82.648°	1	24
.12686	82.712°	2	12
.12641	82.738	6	25
.12582	82.772	15	19
.12523	82.806	0	12
.12486	82.827°	5	13
.12440	82.854°	4	25
.12412	82.870°	9	15
.12324	82.921	2	25
.12286	82.943	0	25
.12235	82.972	16	20
.11938	83.144	10	16
.11916	83.157	17	21
.11898	83.167	3	13
.11865	83.186	6	14
.11633	83.320	1	13
.11620	83.327	18	22
.11514	83.388	11	17
.11345	83.486	19	23
.11329	83.495	7	15
.11240	83.546	4	14
.11133	83.608	12	18
.11088	83.634	20	24
.10909	83.737	2	14
.10860	83.766	8	16
.10840	83.772	21	25
.10805	83.797	0	14
.10787	83.808	13	19

Cos η	η	m	n
.10681	83.869°	5	15
.10471	83.990°	14	20
.10444	84.005°	9	17
.10306	84.085°	3	15
.10197	84.147°	6	16
.10182	84.156°	15	21
.10133	84.184°	1	15
.10073	84.219°	10	18
.09915	84.310°	16	22
.09793	84.380°	4	16
.09774	84.391°	7	17
.09738	84.411°	11	19
.09668	84.452°	17	23
.09572	84.507°	2	16
.09501	84.548°	0	16
.09439	84.584°	18	24
.09435	84.586°	12	20
.09400	84.606°	8	18
.09349	84.636°	5	17
.09225	84.707°	19	25
.09150	84.745°	13	21
.09095	84.782	3	17
.09065	84.799°	9	19
.08975	84.851	1	17
.08961	84.859°	6	18
.08905	84.891°	14	22
.08764	84.972°	10	20
.08682	85.019°	4	18
.08672	85.025°	15	23
.08617	85.057	7	19
.08527	85.108°	2	18
.08491	85.129°	11	21
.08478	85.137	0	18
.08456	85.149°	16	24
.08322	85.227°	5	19
.08310	85.233°	8	20
.08255	85.265	17	25
.08242	85.272°	12	22
.08141	85.331°	3	19
.08055	85.380°	1	19
.08034	85.392	9	21
.08014	85.403°	13	23
.08002	85.410°	6	20
.07904	85.524°	14	24
.07902	85.525	4	20
.07794	85.536	10	22
.07717	85.574°	7	21
.07689	85.590°	2	20
.07653	85.611°	0	20
.07609	85.636	15	25

Cos η	η	m	n
.07555	85.667°	11	23
.07503	85.697°	5	21
.07461	85.721°	8	22
.07370	85.774°	3	21
.07346	85.787°	12	24
.07305	85.811°	1	21
.07236	85.851°	6	22
.07228	85.855°	9	23
.07153	85.898°	13	25
.07087	85.936°	4	22
.07016	85.977°	10	24
.07002	85.985°	2	22
.06995	85.989°	7	23
.06974	86.001°	0	22
.06834	86.081°	5	23
.06821	86.089°	11	25
.06777	86.114°	8	24
.06733	86.139	3	23
.06684	86.168°	1	23
.06607	86.212°	6	24
.06578	86.229°	9	25
.06493	86.277°	4	24
.06427	86.315°	2	24
.06406	86.327°	0	24
.06401	86.330	7	25
.06277	86.401	5	25
.06198	86.447	3	25
.06160	86.469°	1	25